ASX Release

14 October 2022

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Beyondie SOP Mine Annual Resource & Reserve Statement

Kalium Lakes Limited (ASX:KLL) (**Kalium Lakes** or the **Company**) is pleased to provide an update on the annual brine extraction, Mineral Resources and Ore Reserves for its Beyondie SOP Mine (**Beyondie** or **BSOPM**) as at 30 June 2022.

- **Update on annual abstraction, Mineral Resources and Ore Reserves now incorporates 2.5 years of brine extraction history at Beyondie.**
- **Approximately 9 giga litres of brine has been extracted at a potassium grade of 9,140 mg/L as at the end of June 2022.**
- **Further drilling and sampling completed as part of the targeted expansion to the 120 ktpa SOP production target has yielded greater aquifer extent at Lake Sunshine and a marginal increase to overall potassium concentration**
- **This saw an overall increase in Beyondie Mineral Resources, including a 5.6% increase in Measured SOP Resources and 1.4% increase in Indicated SOP Resources as at 30 June 2022 (relative to the prior year and after abstraction depletion).**
- **Ore Reserves as at 30 June 2022 have decreased by 2.75% over the past year following incorporation of abstraction depletion.**

Kalium Lakes CEO, Len Jubber, commented:

"The pumping history and consistent performance of the aquifer, coupled with the overall increase in Mineral Resources despite annual depletion through extraction, confirms the overarching quality of the Beyondie deposit."

"Importantly, the reconciliation of abstraction data with the Beyondie geological and resource models continues to be solid. After 2.5 years of abstraction this is establishing a sound historical basis for expressing robust confidence in the Ten Mile and Sunshine Lake aquifers."

"Ongoing 120ktpa expansion drilling will be incorporated into the next major resource and reserve estimate update for Beyondie as at June 2023."

Brine Extraction, Mineral Resources and Ore Reserves Summary

Brine Extraction: Approximately 9 giga litres of brine has been extracted at a potassium grade of 9,140 mg/L (equivalent to 20.5 kg/m^3 of SOP) at the end of June 2022, which corresponds to approximately 82,153 tonnes of potassium and an equivalent of 183,200 tonnes of Sulphate of Potash ("SOP") post processing and excluding recovery losses.

Mineral Resources update: The Mineral Resources of the BSOPM have been updated following completion of an additional 21 exploration holes, 11 new production bores, new geological data, brine samples from exploration and review of the resource model. The summary of the Mineral Resource Estimate is presented in the JORC (2012) Annual Brine Abstraction, Resources and Reserves Report Summary below. Table 1 shows the summary of the Brine Mineral Resources.

The current Mineral Resources of the BSOPM, inclusive of Ore Reserves, include:

- Measured Resource of 4.86 Mt @ 12.66 kg/m^3 SOP (increase of 5.6%)
- Indicated Resource of 15.32 Mt @ 13.26 kg/m^3 SOP (increase of 1.4%)
- Inferred Resource of 13.28 Mt @ 14.19 kg/m^3 SOP (no change)

Table 1: Beyondie JORC (2012) Mineral Resource Estimate as at 30 June 2022

JORC Resource	Drainable Brine Volume (M m^3)	K Grade (mg/L)	K Mass	SO_4 Mass	Mg Mass	Drainable Brine Volume K_2SO_4 (SOP*) (Mt)	Total Brine Volume K_2SO_4 (SOP*) (Mt)
			(Mt)	(Mt)	(Mt)		
Measured Resource	384	5,675	2.18	6.49	2.21	4.86	12.93
Indicated Resource	1,156	5,945	6.87	18.82	5.99	15.32	47.95
Combined M + I	**1,540**	**5,878**	**9.05**	**25.30**	**8.20**	**20.18**	**60.88**
Inferred Resource	936	6,363	5.96	18.12	5.74	13.28	100.10
Total Mineral Resource	**2,476**	**6,061**	**15.01**	**43.43**	**13.93**	**33.47**	**160.98**

*SOP is calculated by multiplying Potassium (K) by a conversion factor of 2.23.

Note errors are due to rounding.

Measured and Indicated Resources are Inclusive of Ore Reserves

The Mineral Resource has been prepared in compliance with JORC Code 2012 Edition, AMEC Brine Guidelines and the ASX Listing Rules. The Summary Report below contains the pertinent information used in the Mineral Resource Estimate.

Ore Reserves after depletion: The BSOPM Ore Reserves have been reconciled to the brine extraction to end of June 2022. The Ore Reserve Estimate remains unchanged from the BFS (refer ASX announcement 18 September 2018 *Bankable Feasibility Study Completed).* A summary of the Ore Reserves reconciliation by depletion is presented in the Annual Extraction, Resource and Reserves Summary Report below. The produced brine from Ore Reserves is presented in Table 2. The current Ore Reserves of the BSOPM after depletion are presented in Table **3** and Table 4.

The Ore Reserve Estimate will be updated during the studies in relation to further expansion opportunities. This update will be released with the study outcomes and include the revised block model, increased Resources and calibration to the current abstraction.

Table 2: Beyondie Produced Ore Reserves to 30 June 2022

Reserve Category	Brine Volume (10^6 m^3)	K Grade (mg/L)	K Mass (kt)	SO_4 Grade (mg/L)	SO_4 Mass (kt)	K_2SO_4 (SOP) Grade (kg/m^3)	K_2SO_4 (SOP) Mass (kt)
Abstraction from Proved Ore Reserves	4.6	8,672	40.0	24,943	115.1	19.3	89.2
Abstraction from Probable Ore Reserves	4.4	9,627	42.1	27,611	119.7	21.7	94.0
Total Abstraction from Ore Reserves	**9.0**	**9,137**	**82.2**	**26,242**	**234.8**	**20.5**	**183.2**

Note errors are due to rounding. Abstracted tonnes are pre-recovery losses

Table 3: Beyondie Proved Ore Reserves as at 30 June 2022

Aquifer Type	Brine Volume (10^6 m^3)	K Grade (mg/L)	K Mass (Mt)	SO_4 Grade (mg/L)	SO_4 Mass (Mt)	K_2SO_4 (SOP) Grade (kg/m^3)	K_2SO_4 (SOP) Mass (Mt)
Production Bores	114	6,207	0.70	17,945	2.02	13.83	1.56
Total Proved Ore Reserves	**114**	**6,207**	**0.70**	**17,945**	**2.02**	**13.83**	**1.56**

Note errors are due to rounding.

Table 4: Beyondie Probable Ore Reserves as at 30 June 2022

Aquifer Type	Drainable Brine Volume (10^6 m^3)	K Grade (mg/L)	K Mass (Mt)	SO_4 Grade (mg/L)	SO_4 Mass (Mt)	K_2SO_4 (SOP) Grade (kg/m^3)	K_2SO_4 (SOP) Mass (Mt)
Lake Sediments	209	4,755	0.98	13,699	2.82	10.6	2.18
Production Bores	79	6,713	0.52	18,867	1.44	14.69	1.15
Total Probable Ore Reserves	**288**	**5,290**	**1.50**	**15,111**	**4.26**	**11.72**	**3.33**

Note errors are due to rounding.

Annual JORC (2012) Brine Extraction, Mineral Resource and Ore Reserves Summary Report

Introduction

Brine pumping commenced in October 2019 from Ten Mile Lake (**Ten Mile**) and final commissioning of all bores and trenches at Lake Sunshine (**Sunshine**) was completed by November 2020. Since then, operations have been ongoing at maximum capacity to meet the seasonal evaporation pond demands.

Drilling for the 120ktpa expansion commenced in November 2021. At the end of June 2022, 21 exploration holes and 11 new production bores have been completed. The data collected from this work has resulted in new geological data and additional brine assays at Sunshine East which has resulted in an increase in Mineral Resources.

The annual update includes reconciliation of the Ore Reserves from depletion to reflect the abstraction to date.

Brine Extraction

As of 30 June 2022, a total of 23 production bores have been operational, with twelve at Ten Mile and eleven at Sunshine, whilst 10.4 km of trenches at Ten Mile and 13.8 km of trenches at Sunshine have been excavated with two pumping points at each trench network. A total of 9 GL of brine has been extracted and pumped to the pre-concentrator ponds at an average potassium grade of 9,140 mg/L for approximately 82,153 tonnes of potassium and an equivalent of approximately 183,200 tonnes of SOP.

During late 2021 brine extraction was impacted at Sunshine due to trench silting and subsequent gypsum saturation issues at the pre-concentration pond and precipitation of gypsum and other salts in the transfer pipeline, temporarily reducing pumping capacity (first reported in ASX announcement 3 November 2021 *Beyondie SOP Project - Commissioning Update*). Ten Mile has performed at or beyond expectation in relation to brine volume and grade produced, partially making up for some of the brine extraction losses from Sunshine. During May 2022 unseasonal rainfall impacted the ability to extract brine through to the end of June due to the ponds being full. These aspects of the brine extraction are presented in Figure 1 and Table 5 which show the extraction in tonnes of potassium by area.

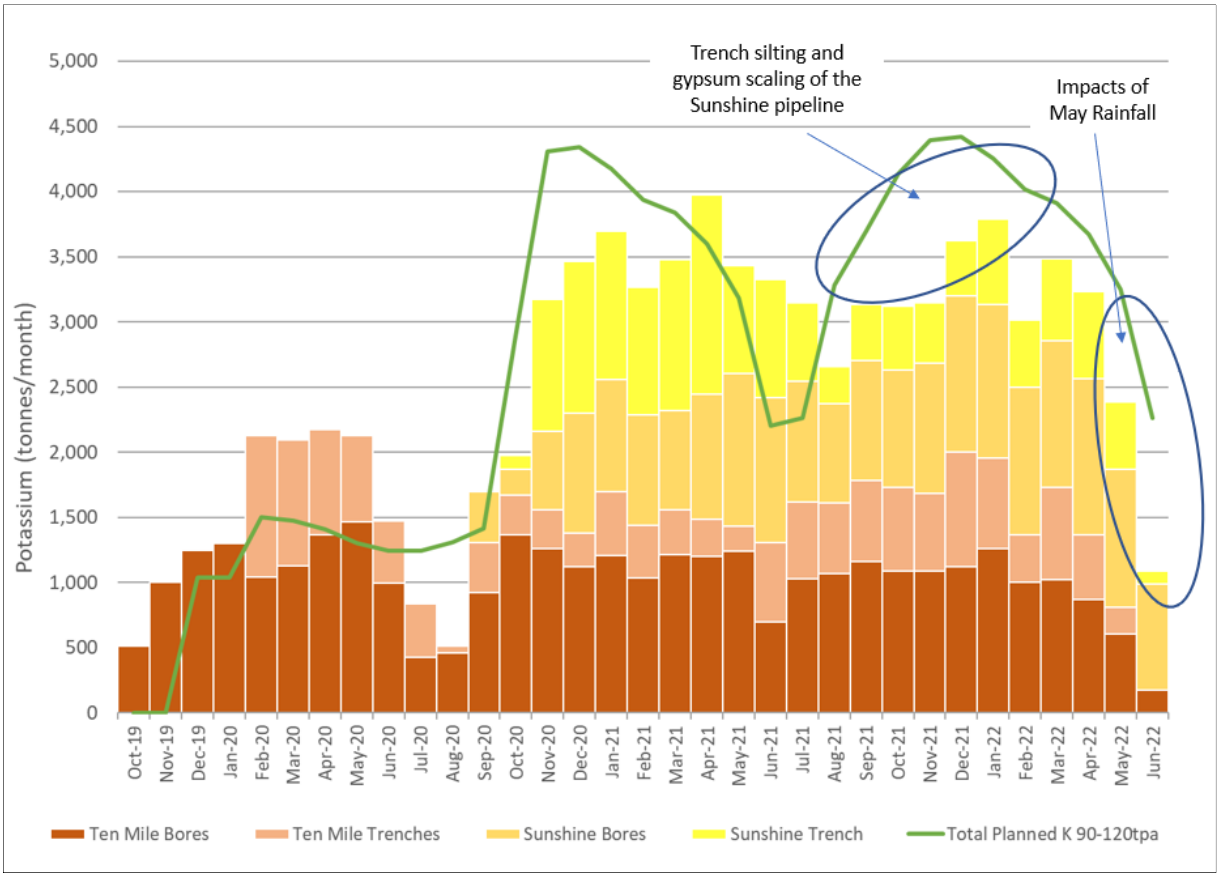

Figure 1: Extraction rates of potassium by production area

Table 5: Extracted Brine Volumes to 30 June 2022

Area	Brine Volume (10^6 m^3)	Average K Grade (mg/L)	K Mass (kt)	SO_4 Mass (kt)	K_2SO_4 (SOP) Mass (kt)
Ten Mile Production Bores	3.6	9,100	33.0	95.7	73.6
Ten Mile Trench	1.1	13,100	14.6	42.3	32.5
Sunshine Production Bores	2.5	7,900	20.0	56.0	44.6
Sunshine Trench	1.7	8,500	14.6	40.8	32.5
Total	**9.0**	**9,100**	**82.2**	**234.8**	**183.2**

Note errors are due to rounding. Note: abstracted tonnes are pre-recovery losses

Mineral Resources

The updated Mineral Resource Estimate covers small increases in Measured and Indicated Resources at Ten Mile Lake and Lake Sunshine, all within the existing Resource footprint. The update has been completed with the inclusion of the results from drilling of an additional 21 exploration holes, 11 new production bores and associated brine samples. The geological model has been updated from new information at Sunshine East where the majority of the additional exploration drilling has been completed. A review of the resource variography and search parameters has been completed to generate new block models. All other parameters remain unchanged from the August 2021 update (ASX announcement 18 August 2021 *Feasibility Study Complete for new Base Case Production Increase to 120ktpa at Beyondie SOP Project*).

The Mineral Resource has been prepared in compliance with the JORC Code 2012 Edition, AMEC Brine Guidelines and the ASX Listing Rules. The following is a summary of the pertinent information used in the Mineral Resource Estimate with full details provided in the JORC Code Table included as Appendix 3.

Exploration Summary

The BSOPM deposit is a brine, containing mineralisation of dissolved solutes of potassium and sulphate ions required to form a potassium sulphate salt. The brine is contained within saturated sediments below and in the vicinity to playa lake surfaces.

The exploration phase of the project commenced in 2015 and has involved a complex data collection programme, including augering, geophysics, drilling, water and soil sampling, aquifer testing and laboratory analysis. Exploration to date has comprised of the following:

- 351 aircore, diamond and sonic drill holes to collect geological and brine samples;
- 426 auger holes across all the lakes up to depths of between 1.5 and 2 m, to collect information on the lake surface geology and groundwater samples;
- 42 large 200 to 250 mm diameter cased production bores;
- 1,150 km of geophysical traverses between Ten Mile Lake and White Lake;
- Installation of 85 monitoring boreholes;
- Excavation of ten trial trenches for 1,640 m of trench;
- Grain size analysis of 114 lithological samples;
- 43 laboratory analyses of cores for porosity;
- 18 Borehole Magnetic Resonance (BMR) logs;
- 13 mini aquifer tests (1 hr pumping / 1 hr recovery);
- 18 constant rate / recovery aquifer pumping tests;
- Laboratory analysis of water samples collected from augering (453), drilling (983) and during the aquifer testing and bore development (190);
- 20 leach tests of the surface sediments;
- 20 weeks of bore test pumping;
- 11 weeks of trial trench test pumping;
- 45 weeks of trial pond pumping; and
- >1.5 GL of brine pumped from aquifers during the exploration phase.

The details of the pre-2021 exploration programs are summarised in ASX announcement 27 August 2020 *Significant Increase in Resources at Lake Sunshine* and ASX announcement 18 September 2018 *Bankable Feasibility Study Completed*. Kalium Lakes is not aware of any new information or data that materially affects the exploration results information included in those market announcements.

During FY22, 21 new exploration holes and 11 new production bores were completed. The new exploration drilling has focussed on Sunshine East with the aim of confirming production bore locations for the 120ktpa expansion (Figure 2 and Figure 3). One new exploration hole has been completed at

Ten Mile which was converted to a monitoring bore. Exploration drilling has been completed with a combination of 140mm Aircore, reverse circulation hammer and conventional hammer, depending on ground conditions. Brine samples were obtained from the sample cyclone following prolonged airlifts. Potassium grades from exploration drilling have ranged from approximately 2,600 to 10,500mg/L. The lower end grades are located away from the lakes at shallower depths (<30m), the higher grade brines (>10,000 mg/L) are located on the lake edge at >100m depth, consistent with previously reported results.

The 11 new production bores are all at Lake Sunshine; two production bores were completed at Sunshine West, one within the existing Sunshine borefield footprint and eight new production bores at Sunshine East. Two production bores were completed with conventional air hammer at 311mm diameter and the remaining bores were completed with conventional mud rotary at either 311mm or 370mm diameter depending on the geology encountered. All production bores were constructed with a mix of CL18 and CL12 200mm uPVC blank and slotted casing and 200mm 316 stainless steel screens. Brine samples were obtained from production bores at the end of bore development and are considered representative of the screen interval of the aquifer. The locations of all new drilling and brine sampling is presented in Appendix 2.

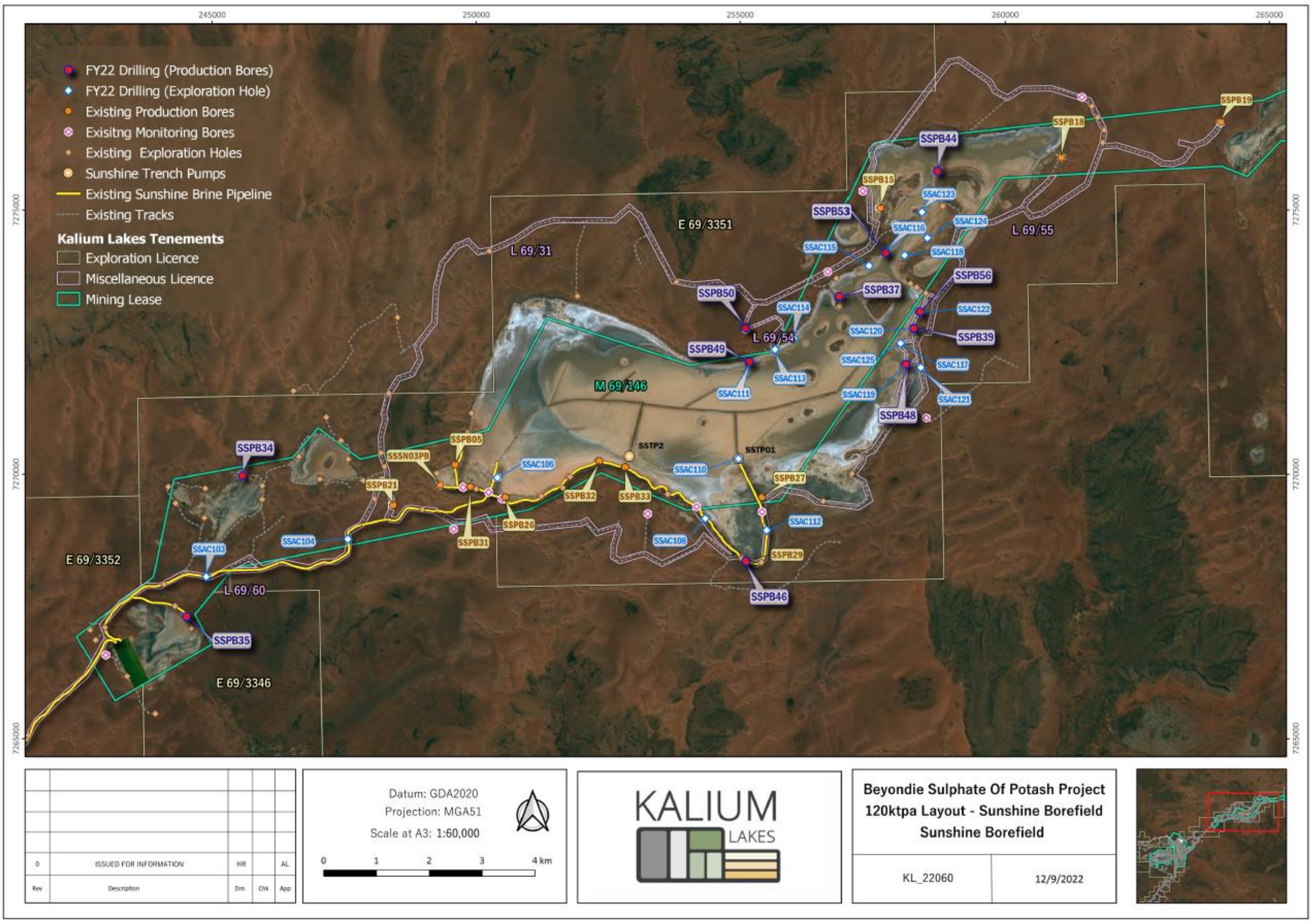

Figure 2: FY22 Drilling at Lake Sunshine

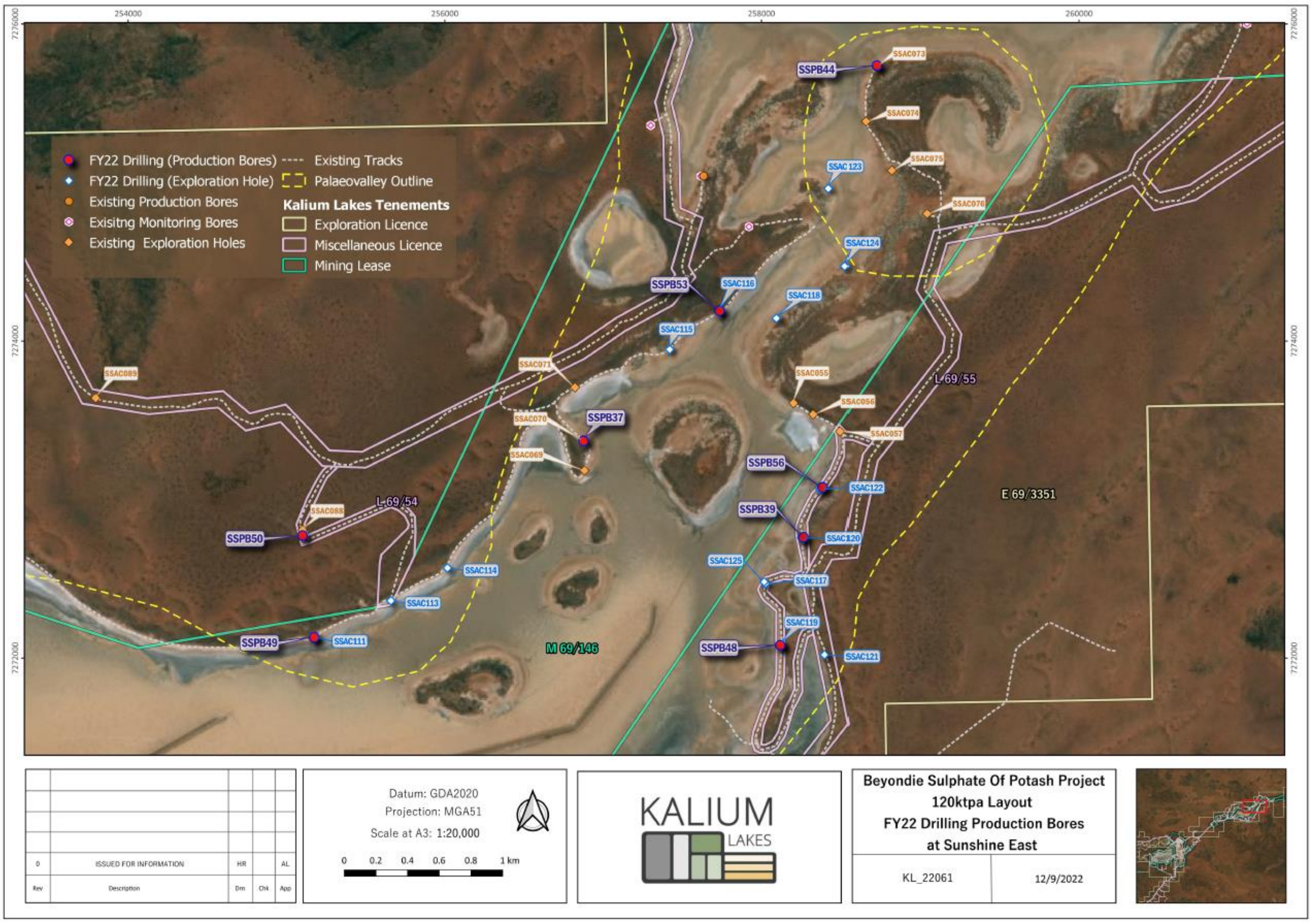

Figure 3: FY22 Drilling at Sunshine East

The new exploration holes have provided some additional detail on the geology of the Sunshine East area of the Lake Sunshine deposit. A southerly extension of the palaeovalley has been defined that was not readily detected in the geophysical surveys. The southerly extension of the basal sand is approximately 60m deep and between 5 and 15m thick and is underlain by weathered sandstone and siltstone of the North-West Officer Basin. Potassium grade in this part of the palaeovalley is between 7,500 and 8,000mg/L, reflective of the average concentrations found across Lake Sunshine in the vicinity of the lake.

Three production bores have been installed within this palaeochannel where it meets the lake edge, with potential to extend the borefield to the northeast.

Project Geology

The Project area is located within the Collier, Salvation, Scorpion, and North-West Officer Basins, stretching over a 200 km strike. The southwestern end of the project is located on the margin of the Archean Marymia Dome of the Yilgarn Craton and the Proterozoic basin sediments. The Proterozoic basin sediments dip approximately northeast across the project areas and onlap the greenstone and granite of the Yilgarn to the southwest of the project area.

The granite in the area is characterised as monzogranite, which is potassium rich and composed mostly of potassium feldspar (alkali-feldspar) and quartz; the proximity of the granite to the BSOPM area, along with other granitic inliers, makes it a suspected source of the potassium enrichment in the region's sub-surface brine deposits.

The Proterozoic sediments across the Project area are considered representative of shallow marine sediments of interbedded sandstone, siltstone and mudstone of low to medium metamorphic alteration. Sandstone is particularly prevalent on the eastern side of Ten Mile and across Sunshine.

Mafic intrusions, belonging to the Warakurna Large Igneous Province, outcrop sporadically across the BSOPM area and can be mapped with the publicly available regional aeromagnetic data sets. Identified as dolerites, amygdaloidal basalts and diorite. These intrusive rocks and their weathering profiles are also considered a source for potassium enrichment.

During the Late Carboniferous to Early Permian glaciation the palaeo-topography was re-shaped through glacial advance and retreat, depositing glacial sediments hundreds of kilometres north and west of the Project. The residual "scoured" landscape following glacial retreat produced during those Palaeozoic times is represented by the palaeo-drainage of the region. This network has been subject to sedimentation comprising palaeovalley fill of Cenozoic sediments. Three phases of Cenozoic sedimentation are considered to make up the palaeo-drainage sequence, known as the palaeovalley sediments:

1. Palaeochannel sand – mid to upper Eocene aged
2. Lacustrine clay – late Oligocene to mid Miocene aged
3. Mixed alluvial and colluvium – Pliocene aged

The basal palaeochannel sand unit is dominated by the deposition of higher energy fluvial sand, considered to have been formed in braided river depositional environments under wet climatic conditions. These facies are typically located in the deepest parts of the palaeovalley. Unconformably overlying the basal palaeochannel sand horizon, are low energy lacustrine clay horizons interpreted as forming within valley lakes and wetlands. More discrete fluvial fine sand sequences are present within the lower clay deposits, associated with lower energy palaeo-stream and channel depositional environments during a drying climate. An upper alluvial and colluvial sequence is the youngest deposit within the sequence. It is derived from tectonic adjustments and deflation and is varied in nature, texturally modified by ferricrete, silcrete, weathering and regolith processes.

The contact between the Cenozoic sediments and the bedrock is considered the palaeo-topography. Deep weathering profiles on this topography have been observed from geophysics and drilling. The saprolitic profiles are significant unconsolidated and friable sediments on the margins of the palaeovalley where more weakly cemented sandstone is often present. The project presented in Figure 4.

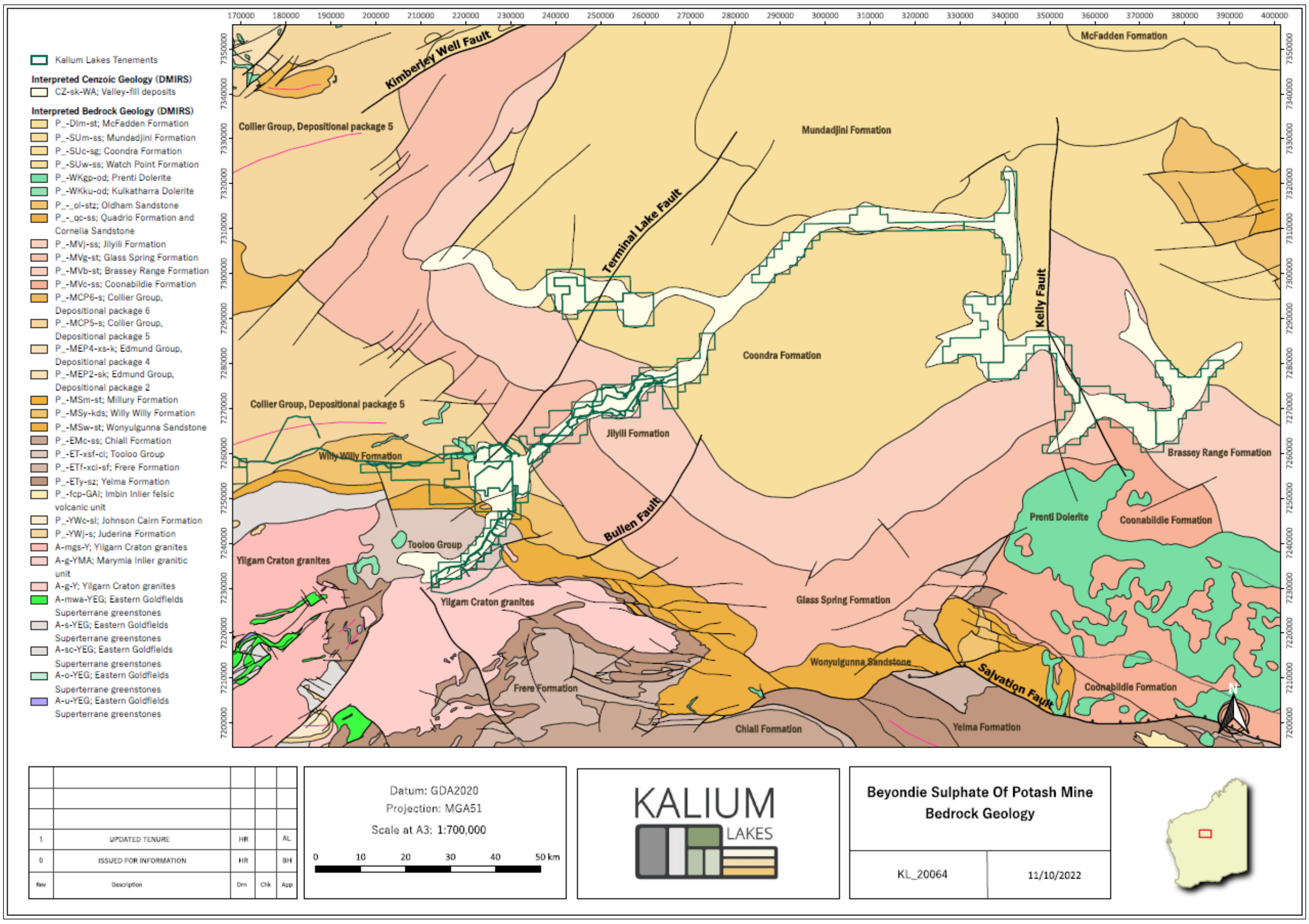

Figure 4: Interpreted Project Geology

Hydrogeology

Two regional aquifer units have been identified within the Cenozoic sediments, the palaeochannel sand aquifer, located at the base of the palaeo-drainage system, and the shallow surficial aquifer comprising Quaternary evaporites, calcrete and silt of the lake surface and alluvium. These aquifers are considered to be hydro-geologically separated from one another by the thick sequence of stiff lacustrine clays that form an aquitard.

The regional fine grained and metamorphosed bedrock sediments are considered to be on the whole of low aquifer potential. Sandstone dominated lithologies of the Jilyili and Glass Springs Formations of the Savoury Group are permeable at Lake Sunshine and the eastern side of Ten Mile Lake, in conjunction with deep weathering profiles and vesicular basalt have proven to be highly prospective aquifer targets. Regional structural features and specifically the unconformity between the Willy Willy Formation and the Backdoor Formation enhance aquifer transmissivity as linear features at Ten Mile Lake.

Groundwater within the surficial aquifer is generally between 0.2 m and 11 m below ground level, with depth to the ground water table determined by location within the catchment and local topographic changes. Groundwater flow within the surficial aquifer is generally driven by rainfall and episodic creek flow recharge to the aquifer system. The groundwater flow direction generally follows the surface topography, with recharge and groundwater mounding dominant in the ephemeral creek systems and discharge via evaporation occurring in the playa lakes through evaporation.

Groundwater within the palaeochannel sand aquifer is confined in nature and has a piezometric head that is independent to groundwater flow at the groundwater table. Piezometric head is a pressure response of regional scale that is at a very low gradient (0.00008) from southwest to northeast across the Ten Mile and Sunshine Lake areas. The piezometric head is generally between 0.1 m and 0.5 m below the elevation of the water table near the centre of the palaeochannel. This head difference becomes up to 1 m lower at the margins of the palaeovalley. These differences indicate a degree of vertical downward drainage through the profile and potential mode of recharge from the surficial aquifer to the palaeochannel sand aquifer, this maybe directly through the clay zones over very long-time frames or, more readily, at the margins of the palaeovalley through weathered and fractured bedrock.

Where bedrock aquifers are encountered below lacustrine clay the groundwater system is confined in nature. However, where weathered bedrock is exposed outside of the palaeovalley groundwater is unconfined or leaky and moves according to local groundwater table flow patterns.
The conceptual understanding of the system and the aquifers targeted for brine production is presented in Figure 5 below.

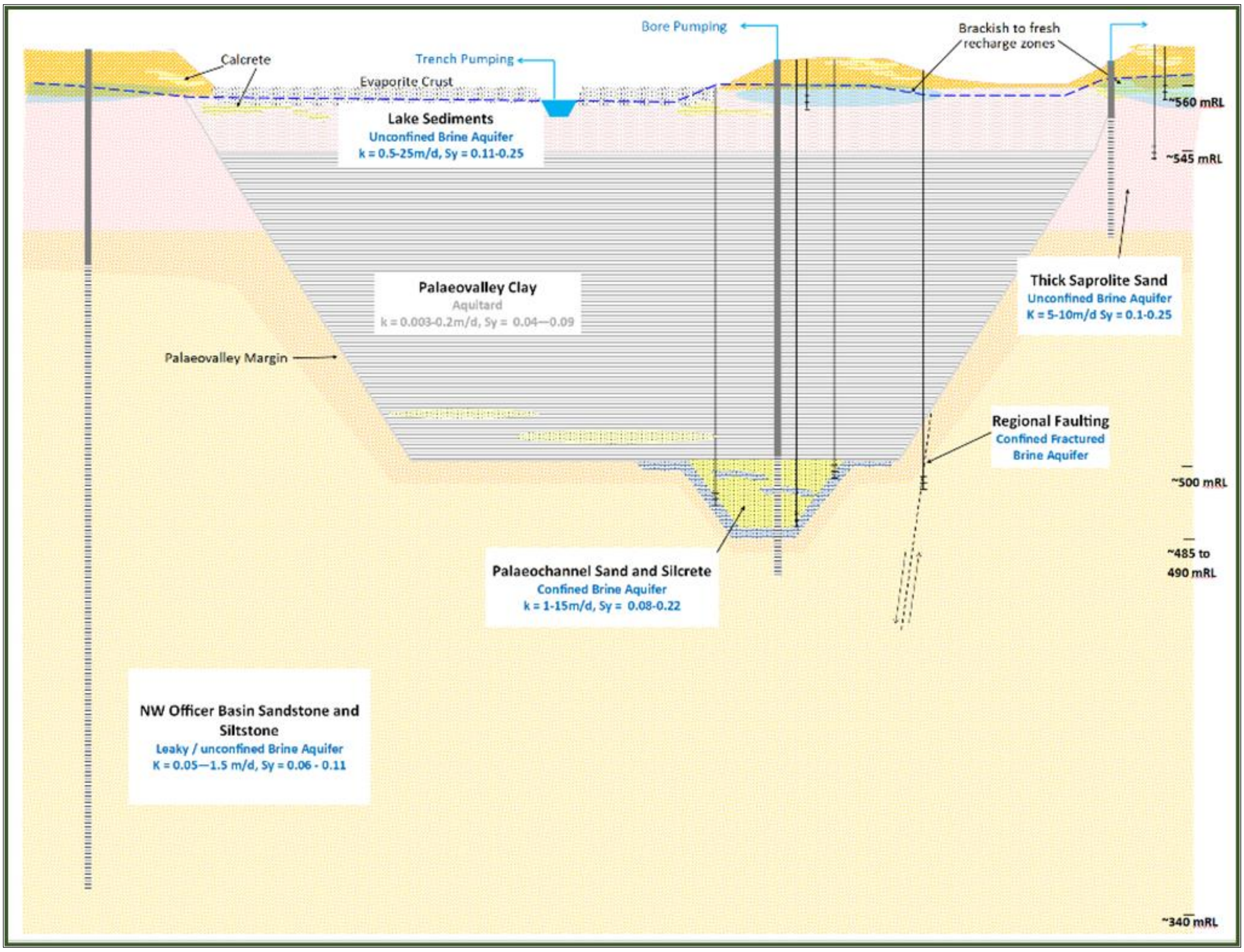

Figure 5: Hydrogeological Conceptual Model of the BSOPM

Porosity and Specific Yield

Total porosity is the volume of brine filled pores that is present in a unit volume of material. The specific yield (or drainable porosity) is the portion of the total porosity that is freely drainable under gravity. The remaining portion of the total porosity is called specific retention.

Brine resources are determined from the specific yield volume of the aquifer, whilst total porosity is reported to address volumes of brine that can be abstracted under non-traditional methods of extraction (for example dissolution and diffusion processes). The economic extractable volume is determined by estimation of a Reserve which takes into account the Mining Factors of a brine including hydraulic conductivity, the dynamics of the aquifers targeted and brine grade changes in response to pumping and recharge impacts.

Specific yield and total porosity have been derived from a number of sources; these include:

- Aquifer testing;
- Laboratory analysis of core and drill samples; and
- Borehole magnetic resonance (BMR) logging.

The specific yield for the lake sediments is reliant on the aquifer testing results of the trenches, these results are considered the most representative of the aquifer. Core analysis has been used for calibration of the BMR logs which have been used as the primary source of specific yield for all other lithologies, this has provided a high vertical resolution of specific yield in the lithological profile. The adopted specific yield and total porosity ranges are presented in Table 6 and Table 7.

Table 6: Ten Mile and Beyondie Porosity and Specific Yield Ranges

Lithology	Total Porosity (-)		Specific Yield (-)	
	Range	Weighted Mean	Range	Weighted Mean
Lake Sediments	0.43 - 0.48	0.45	0.11 - 0.25	0.16
Alluvium	0.32 - 0.42	0.39	0.07 - 0.18	0.13
Palaeovalley Clay	0.32 - 0.42	0.36	0.04 - 0.09	0.06
Sand and Silcrete	0.22 - 0.35	0.34	0.17 - 0.22	0.21
Fractured / Weathered Sandstone	0.25	0.25	0.08	0.08
Fractured / Weathered Siltstone	0.22	0.22	0.03	0.03

Table 7: Lake Sunshine Porosity and Specific Yield Ranges

Lithology	Total Porosity (-)		Specific Yield (-)	
	Range	Weighted Mean	Range	Weighted Mean
Lake Sediments	0.42 - 0.48	0.45	0.12 - 0.19	0.17
Alluvium	0.14 - 0.38	0.31	0.04 - 0.15	0.12
Palaeovalley Clay	0.30 - 0.37	0.33	0.03 - 0.11	0.08
Sand	0.17 - 0.35	0.29	0.10 - 0.25	0.20
Weathered Sandstone	0.12 - 0.25	0.16	0.06 - 0.18	0.08
Sandstone	0.12 - 0.19	0.15	0.04 - 0.12	0.08
Fractured / Weathered Siltstone	0.07 - 0.27	0.24	0.03 - 0.11	0.08
Fractured / Weathered Basalt	0.24	0.24	0.16	0.16

Sampling and Sub-Sampling

During exploration all drill holes were sampled for lithology and where possible brine quality during drilling. Lithological samples of aquifer zones in the surficial aquifer (Lake Sediments and Alluvium) and palaeochannel sand aquifer were obtained from drill samples and selected for laboratory testing.

Brine samples were obtained during aircore drilling from the cyclone during extended airlift testing at varied intervals. These samples are interpreted to be indicative of the depth at which the airlift is taking place, though some contamination from the surficial aquifer cannot be ruled out. Samples obtained from test pumping are considered to be the most representative of the target aquifers, where the aquifer zone is cased and sealed to prevent any inter-bore flow. Samples obtained from trench pumping are considered representative of the length and depth of the excavation.

Auger samples are considered representative of the upper surficial aquifer at each of the lake surfaces, and all samples were taken up to a maximum depth of 1.5 m for the 2015 holes and up to 2 m depth in the 2017 and 2020 sampling. Wherever possible, auger samples were typically taken at a 1 km grid spacing.

Sonic core of 100 mm diameter was obtained from ten locations across Ten Mile and Lake Sunshine. Core was extruded from the core barrel into clear plastic core bags. Core bags were sealed and placed into core trays, which were labelled at the drill site and stored on site. Following geophysical logging individual core trays were selected for laboratory testing and transported back to Perth. The core was tested for permeability, total porosity, specific yield and laboratory based magnetic resonance.

Drill hole spacing in the various project areas is described below:

- Beyondie and Ten Mile Surficial Sediments is between 1600 and 150 m (average is approximately 250 m);
- Beyondie and Ten Mile Palaeochannel and Bedrock is between 1600 and 150 m (average is approximately 270 m);
- Sunshine Surficial Sediments is between 2,200 and 150 m (average is approximately 250 m);
- Sunshine Palaeochannel and Bedrock is between 2,200 and 150 m (average is approximately 300 m);
- Regional lake surfaces is approximately 1,000 m; and
- Ten Mile West lake surface approximately 1,000 m. Ten Mile West palaeovalley and bedrock is approximately 2,000 m.

During operations, brine sampling of production bores and trenches has occurred on an approximately weekly basis taken from sample taps on the pumping skid headworks.

Mineral Resource Estimate Classification Criteria

Resource categories are linked to the types of data obtained, drill hole density and confidence; these are listed below by category below.

Measured Resources have been calculated for areas where:

- Drilling and testing has confirmed local site geology and aquifer geometry to a high level of confidence;
- Aquifer hydraulic properties (hydraulic conductivity and specific yield) have been determined by multiple methods to a high level of confidence;
- Test pumping has measured groundwater flow interactions between the various geological units to confirm extractability;
- Where operational data from production bores and trenches is present; and
- Brine samples have been collected at regular intervals on a dense drill pattern with a high level of QA/QC to confirm brine concentrations.

Indicated Resources have been calculated for areas where:

- Drilling and testing has confirmed local site geology and aquifer geometry;
- Aquifer hydraulic properties (hydraulic conductivity and specific yield) have been determined by more limited sampling and testing than Measured Resources;
- Test pumping has been completed to demonstrate extractability;
- A number of brine samples have been collected from a selection of locations to confirm brine concentrations; and
- Lake surface leaching, the mass of the lake surface total porosity that has been measured and can be mobilised via diffusion during recharge events which has now been observed in trench operations.

Inferred Resources have been calculated, based on a lesser amount of data and confidence, where:

- Geological evidence exists to imply but not verify the existence of brine grade and aquifer geometry;
- Proven geophysical techniques have been used to infer palaeovalley aquifers away from the main drilling investigation areas;

- Surface sampling and testing has determined brine grade at shallow depths which has been inferred to reasonably persist to deeper aquifers as per the existing resource models; and
- Aquifer properties can be inferred from tests undertaken in other contiguous areas of the same palaeovalley system.

Exploration Targets have been calculated where:

- No brine-chemistry data exists of any kind to confirm the brine quality, but some aquifer continuity with known brine resources may be expected based on geophysics (for example along the palaeochannel reaches between lakes); and
- Shallow-augering has provided evidence of high potassium concentrations which may be expected to occur throughout the sequence (based on potassium distribution with depth observed elsewhere), but there is no drilling or geophysical data available to provide any geological context to the brine occurrence or infer what the sequence at depth may be.

Due to the considerable distances involved between defined brine deposit zones at the BSOPM, Resources have been split into four separate areas: Ten Mile Lake and Beyondie; Lake Sunshine; Ten Mile West and the Regional Lakes.

Resources have been determined for the five dominant lithological types within the project area:

- Lake surface sediments;
- Alluvial sediments;
- Palaeovalley clay;
- Palaeochannel sand (and silcrete where significant secondary silica cementation occurs); and
- Weathered and fractured bedrock.

Mineral Resource Estimation Methodology

- A 3D geological model was constructed in Leapfrog Geo (version 2021.2.5) implicit modelling software from Seequent Limited. The model used all available drilling data, surface mapping and geophysical data to model the geology across the Beyondie, Ten Mile Lake, Ten Mile West and Lake Sunshine areas. The topography of the model was derived from high precision ortho imagery of the main lake areas and bore sites. The ortho imagery has a horizontal accuracy of 0.2 m and vertical accuracy of 0.08 m, all drill holes were levelled to the topography in the model.

- All drill hole assays for potassium, sulphate and magnesium were brought into the model as 1 m intervals when taken from drilling or as composites where assays are representative of screened intervals from bores (ie test pumping and bore development).

- The Leapfrog Edge module in Leapfrog Geo was used for block modelling and numerical estimation. Three block models have been constructed, one for Beyondie and Ten Mile Lake, one for Ten Mile West and one for Lake Sunshine. Beyondie and Ten Mile Lake utilised standard block sizes of 250 m in the x and y direction and 5 m in the z direction. Whilst Lake Sunshine used the same x and y block size but 2.5 m blocks in the z direction, due to some more varied geology. Ten Mile West utilised standard lock sizes of 500 m in the x and y direction and 10 m in z direction in reflection of its relative sparse drill hole and sample density. Sub blocking was used to refine the block model in areas where geological surfaces intersect blocks. Parent blocks were split by up to four blocks in the x and y direction and two blocks in the z direction. The block model grade distributions are presented in Figure 6 and Figure 7.

- Estimators were set up for potassium, sulphate and magnesium for the below water table domain. The domain was clipped to boundaries of the defined resource categories and tenements, as hard boundaries. The base of the domain was defined as 460 mAHD for Beyondie and Ten Mile Lake and Sunshine and 470 mAHD for Ten Mile West. Parameter concentrations were estimated across the cells using Ordinary Kriging, ellipsoid search parameters were assigned following review of the variography of each parameter.

The search parameters for each potassium estimator are listed below:

Ten Mile Lake and Beyondie

- Ellipsoid Ranges - Max. = 8,500 m, Int. = 5,500 m, Min. = 95 m
- No. of Samples – Max = 20, Min = 5.

Lake Sunshine

- Ellipsoid Ranges - Max. = 7,000 m, Int. = 4,200 m, Min. = 110 m
- No. of Samples – Max = 20, Min = 3.

Ten Mile West

- Ellipsoid Ranges - Max. = 4,500 m, Int. = 1,500 m, Min. = 50 m
- No. of Samples – Max = 20, Min = 1.

- Variogram models for each parameter are presented in the JORC Tables for reference. Nearest neighbour (NN) and inverse distance squared (ID2) estimators were also run for potassium as check accuracy calculations. These plots show that the model adopted (k:3x3x2) is appropriate when plotted against the ID2 and NN methods.
- Specific yield was calculated for the surficial lake sediments using the average of the trench test-pumping analysis results. For all other lithologies the average values from core calibrated BMR logging.
- SOP grade from potassium concentrations were calculated using a conversion of 2.23, accounting for the atomic weight of sulphate (sulphur and oxygen) in the K_2SO_4 formula and rounded to two decimal points.
- Resource tonnages were calculated by multiplying the volume of the Resource Zone in each lithology by the specific yield and SOP grade to obtain the drainable SOP volume.

The brine volumes listed below cover each of the individual categories, the total volume is the summation of volumes calculated for each level of Resource category. The areas determined for Resource assessment are presented in Figure 8, Figure 9, Figure 10 and Figure 11.

Based on the criteria listed above, the brine Measured, Indicated and Inferred Resources are provided in Table 8, Table 9 and Table 10 respectively.

Exploration Target

Based on the criteria listed above the Exploration Target (**ET**) is provided as a range in Table 11.

The BSOPM ET is based on future exploration programmes, including a number of assumptions and limitations and are conceptual in nature. It is not an indication of a Mineral Resource Estimate in accordance with the JORC Code (2012) and it is uncertain if future exploration will result in the determination of a Mineral Resource.

The ET grade and volume is derived from the conceptual understanding of the regional geology and brine distribution from local exploration results of drilling and brine assay results. The ET approximation is in areas where gravity surveys have been completed but no drilling or sampling.

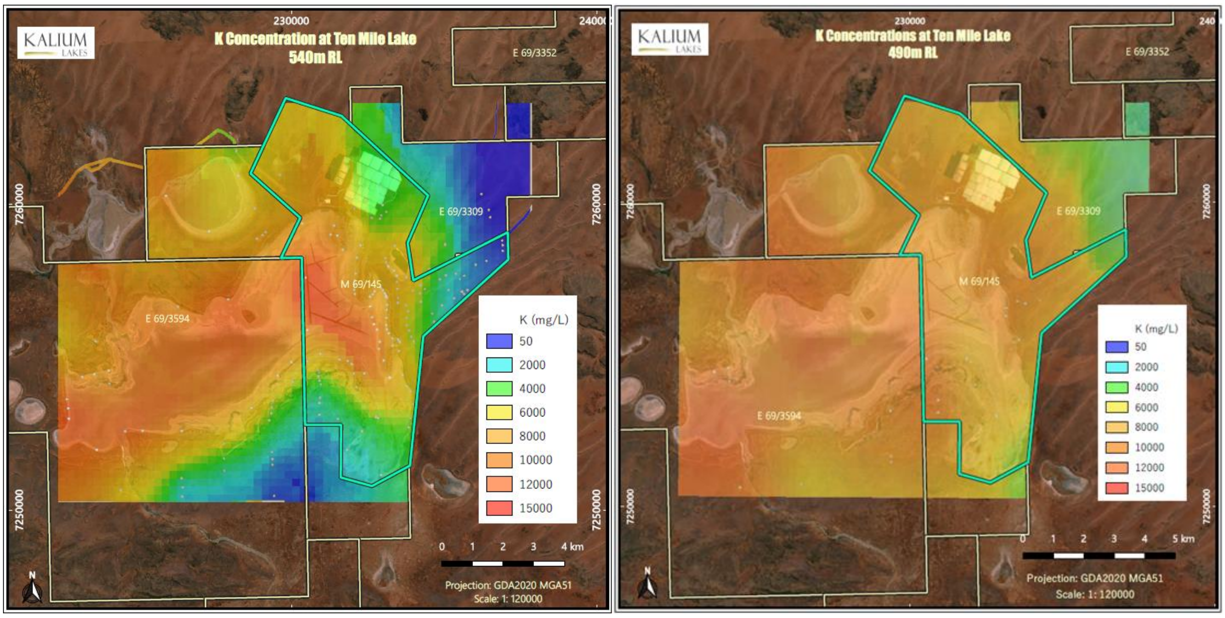

Figure 6: Block Model Potassium Concentration Ten Mile

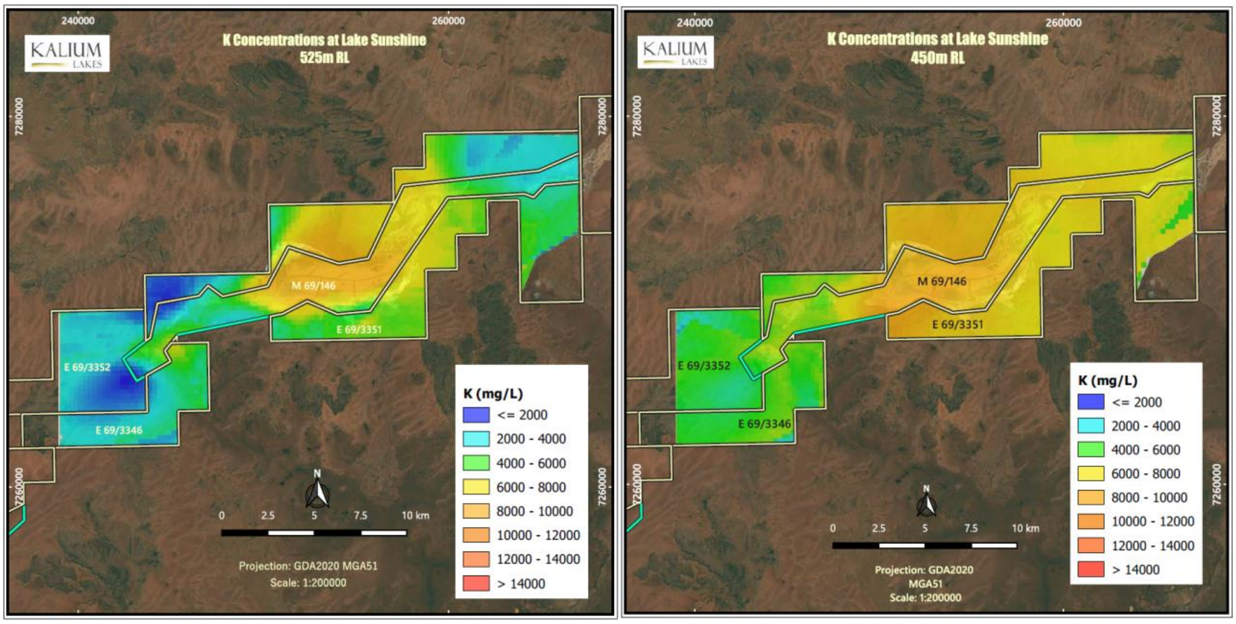

Figure 7: Block Model Potassium Concentration Sunshine

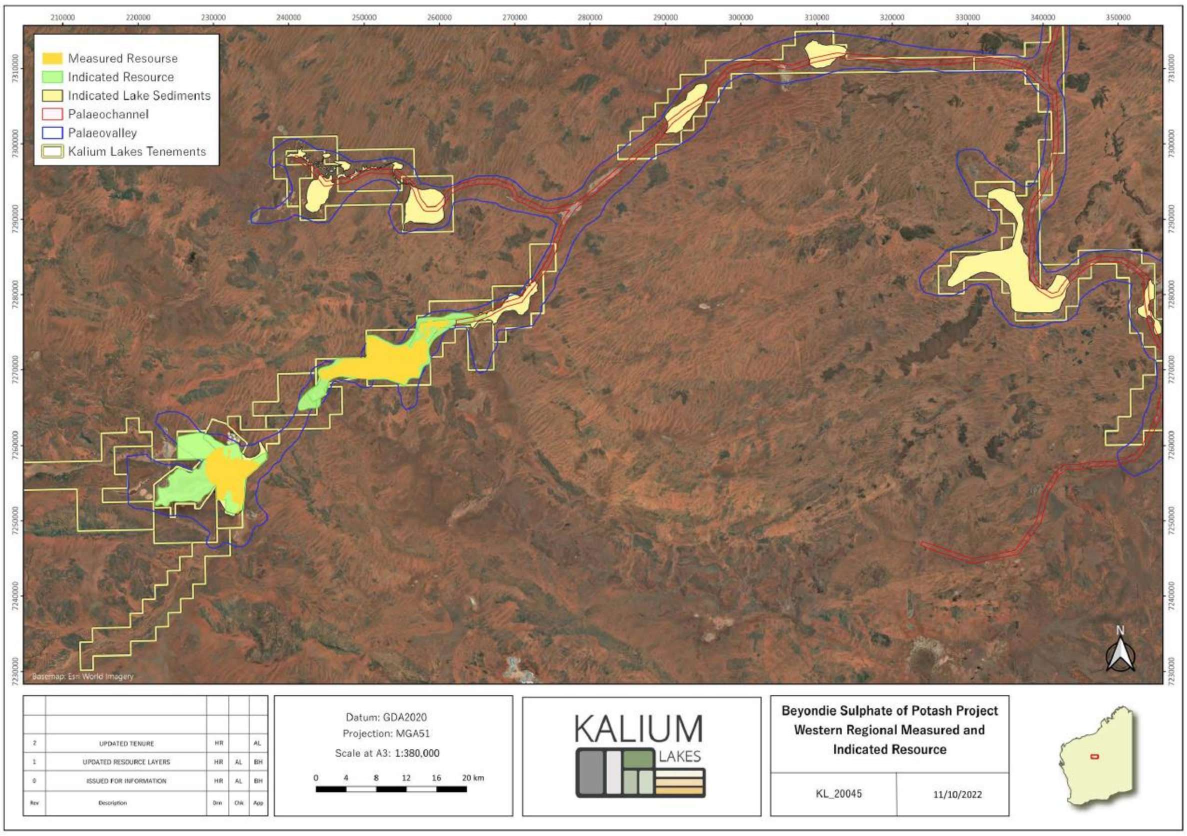

Figure 8: Location of Areas Delineated for Resource Assessment: Western Area Measured and Indicated Resources

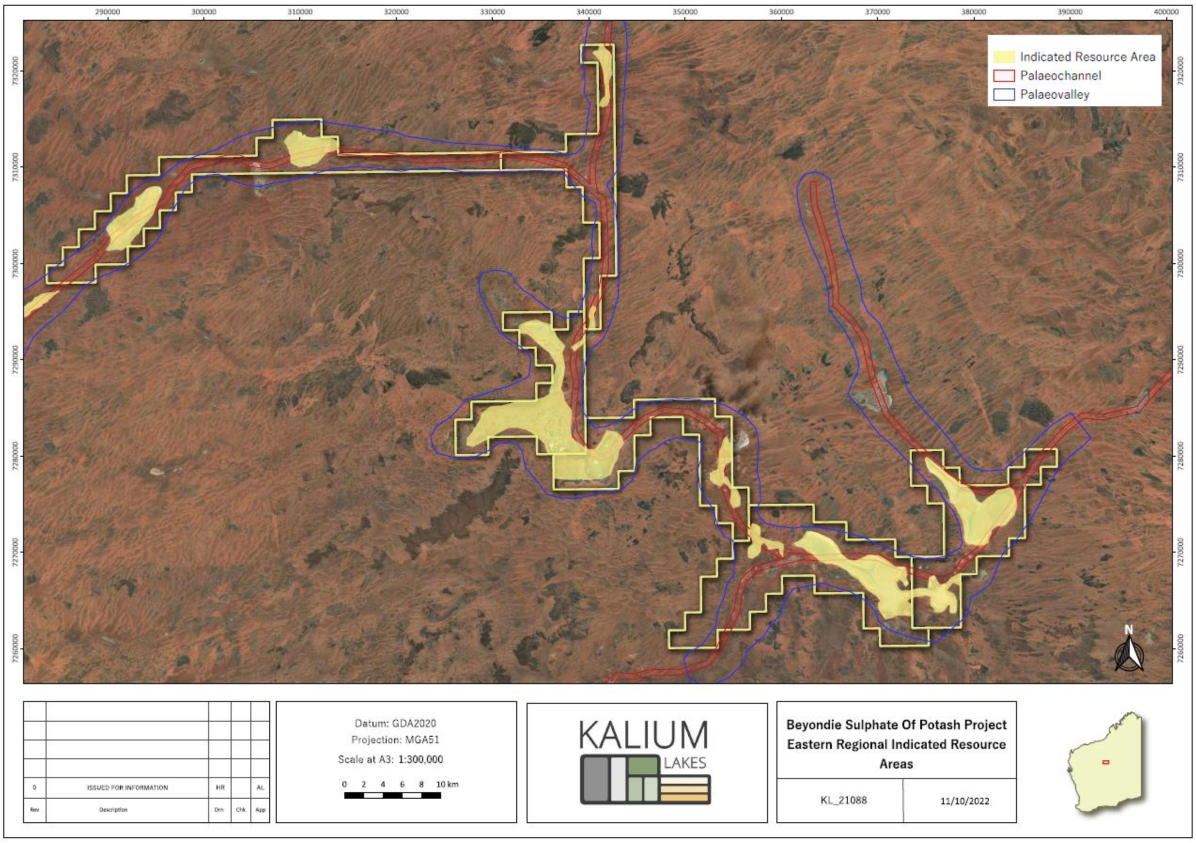

Figure 9: Location of Areas Delineated for Resource Assessment: Eastern Area Indicated Resources

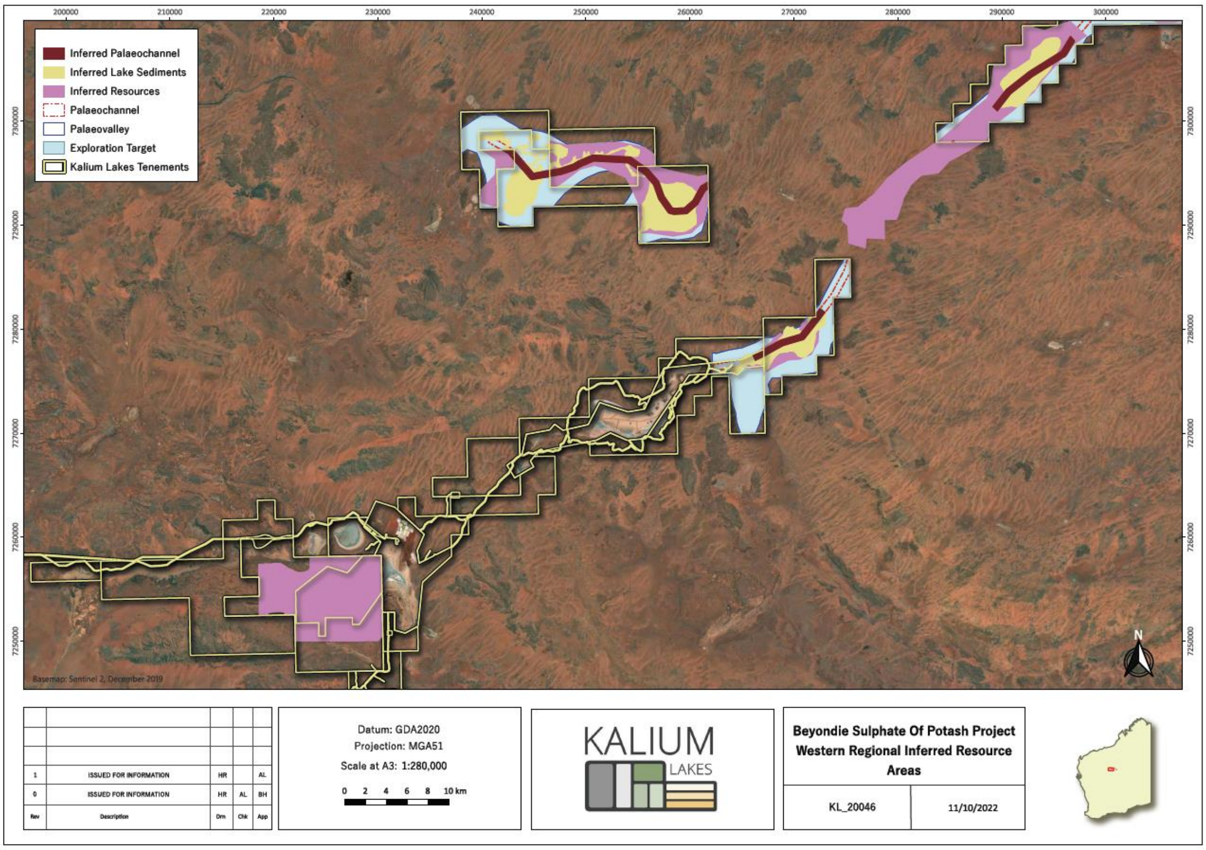

Figure 10: Location of Areas Delineated for Resource Assessment: Western Area Inferred and Exploration Target

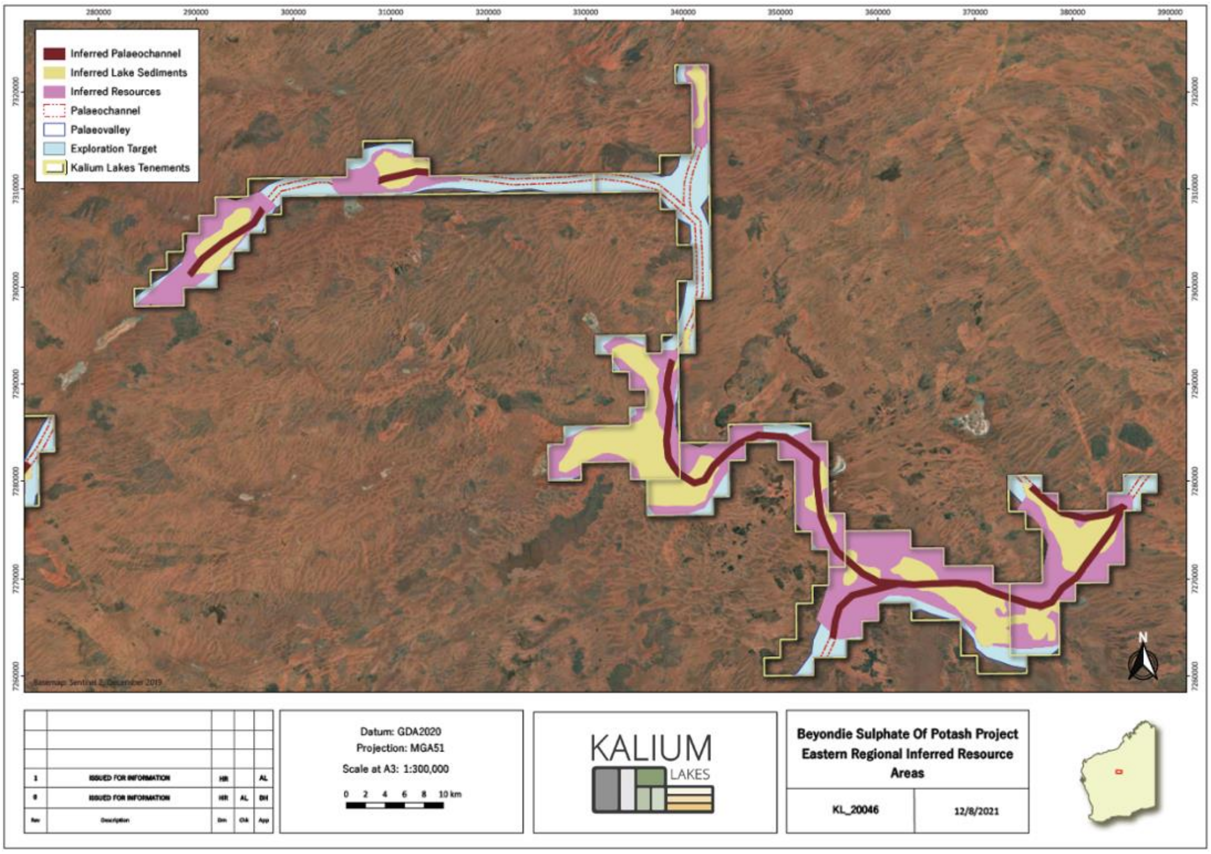

Figure 11: Location of Areas Delineated for Resource Assessment: Eastern Area Inferred and Exploration Target

Table 8: Beyondie JORC Measured Mineral Resources at at 30 June 2022

Aquifer Type	Volume (10^6 m^3)	Total Porosity (-)	Brine Volume (10^6 m^3)	Specific Yield (-)	Drainable Brine Volume (10^6 m^3)	K Grade (mg/L)	K Mass (Mt)	SO_4 Grade (mg/L)	SO_4 Mass (Mt)	Mg Grade (mg/L)	Mg Mass (Mt)	K_2SO_4 (SOP) Grade (kg/m^3)	K_2SO_4 (SOP) Mass (Mt)
Lake Surface Sediments	280	0.47	132	0.17	47	7,484	0.35	19,083	0.89	6,623	0.31	16.69	0.78
Alluvium	131	0.31	41	0.12	16	2,673	0.04	10,556	0.17	4,379	0.07	5.96	0.09
Palaeovalley Clay	936	0.36	333	0.06	58	4,745	0.28	14,482	0.85	4,129	0.24	10.58	0.62
Sand and Silcrete	265	0.33	87	0.21	55	5,633	0.31	17,353	0.95	5,080	0.28	12.56	0.69
Fractured and Weathered Sandstone	1,498	0.16	240	0.08	120	5,992	0.72	18,956	2.27	6,566	0.79	13.36	1.60
Fractured / Weathered Bedrock	916	0.24	220	0.10	89	5,466	0.48	15,334	1.36	5,866	0.52	12.19	1.08
Total Resources	**4,025**		**1,051**		**384**	**5,675**	**2.18**	**16,883**	**6.49**	**5,739**	**2.21**	**12.66**	**4.86**

Note: SOP grade calculated by multiplying Potassium (K) by a conversion factor of 2.23. Errors are due to rounding.

Table 9: Beyondie JORC Indicated Mineral Resources at at 30 June 2022

Aquifer Type	Volume (10^6 m^3)	Total Porosity (-)	Brine Volume (10^6 m^3)	Specific Yield (-)	Drainable Brine Volume (10^6 m^3)	K Grade (mg/L)	K Mass (Mt)	SO_4 Grade (mg/L)	SO_4 Mass (Mt)	Mg Grade (mg/L)	Mg Mass (Mt)	K_2SO_4 (SOP) Grade (kg/m^3)	K_2SO_4 (SOP) Mass (Mt)
Lake Surface Sediments	651	0.46	297	0.12	77	7,379	0.57	20,972	1.62	6,521	0.51	16.46	1.27
Lake Surface Leaching	N/a	N/a	N/a	N/a	80	5,373	0.43	16,986	1.36	3,632	0.29	11.98	0.96
Alluvium	1,335	0.35	467	0.13	167	5,119	0.85	13,494	2.25	4,082	0.68	11.41	1.91
Palaeovalley Clay	1,372	0.34	470	0.07	98	5,926	0.58	16,548	1.63	5,390	0.53	13.22	1.30
Sand and Silcrete	231	0.31	72	0.20	47	4,315	0.20	14,098	0.67	4,454	0.21	9.62	0.45
Fractured and Weathered Sandstone	3,494	0.17	587	0.08	280	6,241	1.74	16,984	4.75	6,026	1.68	13.92	3.89
Fractured / Weathered Bedrock	7,246	0.23	1,662	0.06	406	6,115	2.48	16,105	6.54	5,149	2.09	13.64	5.53
Total Resources	**14,330**		**3,555**		**1,156**	**5,945**	**6.87**	**16,283**	**18.82**	**5,186**	**5.99**	**13.26**	**15.32**

Note: SOP grade calculated by multiplying Potassium (K) by a conversion factor of 2.23. Errors are due to rounding.

Table 10: Beyondie JORC Inferred Mineral Resources at at 30 June 2022

Aquifer Type	Volume (10^6 m^3)	Total Porosity (-)	Brine Volume (10^6 m^3)	Specific Yield (-)	Drainable Brine Volume (10^6 m^3)	K Grade (mg/L)	K Mass (Mt)	SO_4 Grade (mg/L)	SO_4 Mass (Mt)	Mg Grade (mg/L)	Mg Mass (Mt)	K_2SO_4 Grade (SOP) (kg/m^3)	K_2SO_4 (SOP) Mass (Mt)
Lake Surface Sediments	272	0.47	128	0.13	35	11,735	0.41	31,405	1.11	7,969	0.28	26.17	0.93
Alluvium	1,352	0.43	579	0.11	153	5,884	0.90	17,939	2.75	5,899	0.90	13.12	2.01
Palaeovalley Clay	14,508	0.35	5,086	0.03	466	5,898	2.75	17,929	8.35	6,171	2.87	13.15	6.12
Sand and Silcrete	608	0.31	190	0.21	128	5,435	0.70	16,611	2.13	5,569	0.71	12.12	1.55
Weathered / Fractured Bedrock	5,350	0.21	1,149	0.03	154	7,791	1.20	24,625	3.78	6,263	0.96	17.37	2.67
Total Resources	**22,091**		**7,132**		**936**	**6,363**	**5.96**	**19,357**	**18.12**	**6,127**	**5.74**	**14.19**	**13.28**

Note: SOP grade calculated by multiplying Potassium (K) by a conversion factor of 2.23. Errors are due to rounding.

Table 11: Beyondie Exploration Target at at 30 June 2022

Geological Layer	Maximum Thickness (m)	Coverage (km^2)	Volume (10^6 m^3)	Total Porosity (-)	Brine Volume (10^6 m^3)	Specific Yield (-)	Drainable Brine Volume (10^6 m^3)	K Grade (mg/L)	K Mass (Mt)	SO_4 Grade (mg/L)	SO_4 Mass (Mt)	Mg Grade (mg/L)	Mg Mass (Mt)	K_2SO_4 (SOP) Mass (Mt)
Alluvium	6	157	942	0.4	377	0.10	94	2,000	0.2	6,100	0.6	2,300	0.2	0.4
Palaeovalley Clay	30	1,148	34,440	0.45	15,498	0.04	1,378	1,800	1.2	5,500	3.8	2,100	1.4	5.5
Basal Sands	7	108	756	0.35	265	0.18	136	1,600	0.2	5,000	0.7	1,900	0.3	0.5
Weathered Sandstone	10	253	2,530	0.15	380	0.06	152	3,500	0.5	10,500	1.6	4,200	0.6	1.2
Total					**16,519**		**1,760**	**1,942**	**2.1**		**6.7**		**2.5**	**7.6**
Alluvium	12	157	1,884	0.5	942	0.18	339	3,500	1.2	9,600	3.3	3,900	1.3	2.6
Palaeovalley Clay	50	1148	57,400	0.55	31,570	0.06	3,444	3,300	7.6	9,100	20.9	3,700	8.5	25.3
Palaeochannel Sand	15	108	1,620	0.45	729	0.25	405	3,200	1.0	8,700	2.6	3,500	1.1	2.9
Weathered Sandstone	30	299	8,972	0.25	2,243	0.10	897	6,000	5.4	18,000	16.1	7,200	6.5	12.0
Total					**35,484**		**5,085**	**3,782**	**15.2**		**42.9**		**17.4**	**42.9**

The BSOPM Exploration Target is based on a number of assumptions and limitations and is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource for the Exploration Target. It is not an indication of a Mineral Resource Estimate in accordance with the JORC Code (2012) and it is uncertain if future exploration will result in the determination of a Mineral Resource. Note: SOP grade calculated by multiplying Potassium (K) by a conversion factor of 2.23. Errors are due to rounding.

Table 12 is provided to compare the above Resources and Exploration Target, which are based on drainable brine volumes against total brine volume based on total porosity. As can be seen the total brine volume is significantly higher than reporting according to the AMEC Guidelines for drainable brine volumes. For economic production, the drainable brine volume is the most important volume because only a small proportion of brine present in the total porosity, in addition to the specific yield portion can be abstracted, typically through lake surface recharge activity which is inherently unpredictable.

Table 12: Total Porosity Resources Summary

Level	Total Brine Volume (10^6 m3)	K* Mass (10^6 tonne)	SO_4* Mass (10^6 tonne)	Mg* Mass (10^6 tonne)	SOP* Mass (10^6 tonne)
Total In-Situ volume associated with the Measured Mineral Resource	1,051	5.80	17.18	5.37	12.93
Total In-Situ volume associated with the Indicated Mineral Resource	3,555	21.50	58.05	18.79	47.95
Total In-Situ volume associated with the Inferred Mineral Resource	7,132	44.89	137.03	44.07	100.01
Total In-Situ Volume associated with the Exploration Target*	16,519 – 35,484	29 – 110	89 – 303	34 – 123	65 – 245

* Tonnage for K, SO_4, Mg and SOP was calculated from the average grades of K, SO_4 and SOP and the Total Brine Volume for each resource.
Note: Errors are due to rounding.

Mining and metallurgical methods and parameters, and other material modifying parameters

The Brine Resource is to be mined with a combination of lake surface trenches and production bores. Brine is pumped to preconcentration ponds and then transferred to the evaporation and crystallisation ponds. The potassium salts are precipitated and harvested from the crystallization ponds and then concentrated into SOP at the process plant.

In addition to drainable porosity (specific yield) as presented in Table 6 and Table 7, hydraulic conductivity, transmissivity and specific storage are important aquifer properties to assess brine recovery rates and volumes. These properties have been estimated as part of the Ore Reserve Estimate as detailed in ASX announcement on 18 September 2018 *Bankable Feasibility Study Completed*. Kalium Lakes is not aware of any new information or data that materially affects the Exploration Results in this announcement.

Brine grade variation due to recharge and other transient aspects of brine abstraction has been assessed as part of the Ore Reserve estimate and is described in ASX announcement on 18 September 2018 *Bankable Feasibility Study Completed*. Kalium Lakes is not aware of any new information or data that materially affects the Exploration Results in this announcement.

Pilot plant test work has been completed to confirm the process flowsheet (ASX announcements on 18 September 2018 *Bankable Feasibility Study Completed* and 21 January 2019 *FEED Process Recovery Optimisation).* The operation to date is still undergoing optimisation to enable validation of process recoveries.

Ore Reserves update from depletion

The Ore Reserve update from depletion presented in this report is based on the Ore Reserves Estimate completed as part of the BFS (refer ASX announcement 18 September 2018 *Bankable Feasibility Study Completed*). The Ore Reserves presented are reconciled from abstraction to 30 June 2022 by a subtraction in volume. The Ore Reserve Estimate will be updated during the studies in relation to further expansion opportunities.

The brine abstraction has been reconciled to volumes produced from the Proved and Probable Ore Reserves, as shown in Table 13. The update in Reserves is a simple subtraction of the brine volume and tonnes produced, from the 2018 Ore Reserve Estimate, where there are considered to be no material changes, (See ASX announcement 18 September 2018 *Bankable Feasibility Study Completed*) to update the Proved and Probable Ore Reserves, these are presented in Table 14, Table 15 and Table 16.

The future Ore Reserve Estimate will be updated during studies in relation to additional expansion opportunities. This update will be released with study outcomes and include the revised block model described in this report, the current resources and additional calibration to abstraction. Process recovery losses will need to be re-assessed once the evaporation ponds and process plant have been fully commissioned and are in steady state. At the time of reporting the process recoveries for steady state operation are considered to be aligned with those of the BFS.

Table 13: Beyondie Produced Ore Reserves to 30 June 2022

Bore ID	Brine Volume (10^6 m^3)	K Grade (mg/L)	K Mass (kt)	SO_4 Grade (mg/L)	SO_4 Mass (kt)	K_2SO_4 (SOP) Grade (kg/m^3)	K_2SO_4 (SOP) Mass (kt)
Extraction from Proved Ore Reserves	4.6	8,672	40.0	24,900	115.1	19.3	89.2
Extraction from Probable Ore Reserves	4.4	9,627	42.1	27,600	119.7	21.7	93.9
Total Extraction from Ore Reserves	**9.0**	**9,137**	**82.1**	**26,242**	**234.8**	**20.5**	**183.1**

Note errors are due to rounding. Extracted tonnes are pre-recovery losses

Table 14: Beyondie JORC Proved Ore Reserves as at 30 June 2022

Aquifer Type	Drainable Brine Volume (10^6 m^3)	K Grade (mg/L)	K Mass (Mt)	SO_4 Grade (mg/L)	SO_4 Mass (Mt)	K_2SO_4 (SOP) Grade (kg/m^3)	K_2SO_4 (SOP) Mass (Mt)
Production Bores	114	6,207	0.70	17,945	2.02	13.8	1.56
Total Proved Ore Reserves	**114**	**6,207**	**0.70**	**17,945**	**2.02**	**13.8**	**1.56**

Note errors are due to rounding.

Table 15: Beyondie JORC Probable Ore Reserves as at 30 June 2022

Aquifer Type	Drainable Brine Volume (10^6 m^3)	K Grade (mg/L)	K Mass (Mt)	SO_4 Grade (mg/L)	SO_4 Mass (Mt)	K_2SO_4 (SOP) Grade (kg/m^3)	K_2SO_4 (SOP) Mass (Mt)
Lake Sediments	209	4,755	0.98	13,699	2.82	10.6	2.18
Production Bores	79	6,713	0.52	18,867	1.44	14.7	1.15
Total Probable Ore Reserves	**288**	**5,290**	**1.50**	**15,111**	**4.26**	**11.7**	**3.33**

Note errors are due to rounding.

Table 16: Beyondie JORC Ore Reserves Summary as at 30 June 2022

Category	Drainable Brine Volume (10^6 m^3)	K Grade (mg/L)	K Mass (Mt)	SO_4 Grade (mg/L)	SO_4 Mass (Mt)	K_2SO_4 (SOP) Grade (kg/m^3)	K_2SO_4 (SOP) Mass (Mt)
Proved Ore Reserve	114	6,207	0.70	17,945	2.02	13.83	1.56
Probable Ore Reserve	288	5,290	1.50	15,111	4.26	11.72	3.33
Total Ore Reserve	**402**	**5,551**	**2.20**	**15,917**	**4.4**	**12.32**	**4.89**

Note errors are due to rounding.

Competent Persons Statement

The information in this document that relates to Exploration Results, Mineral Resource estimate, Ore Reserve estimate and Exploration Target is based upon information compiled by Mr Adam Lloyd, a competent person who is an employee of Kalium Lakes. Mr Lloyd is a Member of the Australian Institute of Geoscientists and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and the activity which is being undertaken to qualify as a Competent Person for reporting of Exploration Results, Mineral Resources, Ore Reserves and Exploration Targets as defined in the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Certain information in this document is extracted from the ASX announcement titled "*Feasibility Study Complete for new Base Case Production Increase to 120ktpa at Beyondie SOP Project*" dated 18 August 2021 as modified and supplemented by the investor presentation dated 26 July 2022, (together the "Announcements") that relates to Exploration Results, Mineral Resource estimate, Ore Reserve estimate and Exploration Target and is based upon information compiled by Mr Adam Lloyd.

Kalium Lakes confirms that it is not aware of any new information or data that materially affects the information included in the Announcements and, in the case of, Exploration Results, Mineral Resource estimate, Ore Reserve estimate and Exploration Target, that all material assumptions and technical parameters underpinning the estimates in the Announcements continue to apply and have not materially changed. Kalium Lakes confirms that the form and context in which the Competent Person's findings are presented have not materially been modified from the original market announcement. Mr Lloyd consents to the inclusion in this document of the matters based upon his information in the form and context in which it appears.

Cautionary Statement

The Company advises that, while the 120ktpa of SOP production target is predominantly based on Ore Reserves (53% of the production target is underpinned by the Probable category of Ore Reserve and 24% is underpinned by the Proved category) and Measured and Indicated Mineral Resources which fall outside of the Ore Reserves (13% of the production target), it is also partly based on Inferred Mineral Resources (10% of the production target) over the mine life. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised or that the Inferred Mineral Resources will add to the economics of the Beyondie SOP Mine. However, in preparation of the production target and any associated financial forecasts derived from the production target, each of the modifying factors were considered. The Inferred Mineral Resource is not a determining factor in project viability and does not feature as a significant proportion early in the mine plan. None of the production target in years 0 to 11 of proposed production at the Beyondie SOP Mine is from the Inferred Mineral Resource category. The Company has concluded that it has reasonable grounds for disclosing a production target which includes an amount of Inferred Mineral Resource material. The estimated Ore Reserves and Mineral Resources underpinning the production target have been prepared by a Competent Person in accordance with the requirements in the 2012 edition of the JORC Code. No Exploration Target material has been included in the production target or financial forecasts of the Beyondie SOP Mine.

Additional Cautionary Statement Regarding Forward-Looking Information

Certain information in this document refers to the intentions of Kalium Lakes, but these are not intended to be forecasts, forward looking statements or statements about the future matters for the purposes of the Corporations Act or any other applicable law. The occurrence of the events in the future are subject to risk, uncertainties and other actions that may cause Kalium Lakes' actual results, performance or achievements to differ from those referred to in this document. Accordingly, Kalium Lakes and its affiliates and their directors, officers, employees and agents do not give any assurance or guarantee that the occurrence of these events referred to in the document will actually occur as contemplated.

Statements contained in this document, including but not limited to those regarding the possible or assumed future costs, performance, dividends, returns, revenue, exchange rates, potential growth of Kalium Lakes, industry growth or other projections and any estimated company earnings are or may be forward looking statements. Forward-looking statements can generally be identified by the use of words such as 'project', 'foresee', 'plan', 'expect', 'aim', 'intend', 'anticipate', 'believe', 'estimate', 'may', 'should', 'will' or similar expressions. These statements relate to future events and expectations and as such involve known and unknown risks and significant uncertainties, many of which are outside the control of Kalium Lakes. Actual results, performance, actions and developments of Kalium Lakes may differ materially from those expressed or implied by the forward-looking statements in this document. Such forward-looking statements speak only as of the date of this document.

There can be no assurance that actual outcomes will not differ materially from these statements. To the maximum extent permitted by law, Kalium Lakes and any of its affiliates and their directors, officers, employees, agents, associates and advisers:

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- disclaim all responsibility and liability for these forward-looking statements (including, without limitation, liability for negligence).

*** ENDS ***

This announcement was approved and authorised for release by the Board of Kalium Lakes Limited.

Kalium Lakes Limited

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ASX: KLL

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Brent Smoothy	Non-Executive Director
Sam Lancuba	Non-Executive Director
Robert Adam	Non-Executive Director
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Appendix 1 – Mineral Resource Listing Rule References

Aspect	Comment
Geology and geological interpretation	See Geology sections of the JORC (2012) Annual Brine Abstraction, Mineral Resource and Ore Reserves Summary Report in this announcement. Brine hosted SOP deposit within a terminal basin, palaeovalley, sedimentary basin geological setting,
Sampling and sub-sampling techniques	Described in Sampling and Sub-sampling section of the JORC (2012) Annual Brine Abstraction, Mineral Resource and Ore Reserves Summary Report in this announcement.
Drilling techniques	Described in the Exploration Summary section of the JORC (2012) Annual Brine Abstraction, Mineral Resource and Ore Reserves Summary Report in this announcement.
Criteria used for classification	Described in the Mineral Resource Estimate section of the JORC (2012) Annual Brine Abstraction, Mineral Resource and Ore Reserves Summary Report in this announcement.
Sample analysis method	See JORC Table Section 1. Analysis methods for the brine samples used are inductively coupled plasma optical emission spectrometry, Ion Selective Electrode, Inductive coupled plasma mass spectroscopy, volumetrically and colour metrically.
Estimation methodology	Described in the Mineral Resource Estimation Methodology in the JORC (2012) Annual Brine Abstraction, Mineral Resource and Ore Reserves Summary Report in this announcement.
Cut-off grade(s), including the basis for the selected cut-off grade(s)	None
Mining and metallurgical methods and parameters, and other material modifying factors considered to date	Described in Mining and metallurgical methods and parameters, and other material modifying parameters section in the JORC (2012) Annual Brine Abstraction, Mineral Resource and Ore Reserves Summary Report in this announcement

Appendix 2 – Data Tables

Table A1: FY22 New Exploration Holes

Point ID	Location	Easting	Northing	RL (m)	End of Hole Depth (mbgl)
SSAC103	Sunshine	244890	7268065	346.25	79
SSAC104	Sunshine	247571	7268777	542	79
SSAC105	Sunshine	250404	7269941	532.75	139
SSAC108	Sunshine	254342	7269167	533	72
SSAC110	Sunshine	254970	7270298	532	43
SSAC111	Sunshine	255177	7272131	532.5	84
SSAC112	Sunshine	255503	7268945	533.25	121
SSAC113	Sunshine	255661	7272364	532.25	64
SSAC114	Sunshine	256018	7272571	532.25	127
SSAC115	Sunshine	257422	7273949	532.75	63
SSAC116	Sunshine	257736	7274193	532.25	54
SSAC117	Sunshine	258027	7272472	533	35
SSAC118	Sunshine	258096	7274146	532.5	60
SSAC119	Sunshine	258125	7272085	533.5	114
SSAC120	Sunshine	258254	7272761	534	84
SSAC121	Sunshine	258400	7272023	534	80
SSAC122	Sunshine	258371	7273067	532.75	57
SSAC123	Sunshine	258424	7274964	532.25	54
SSAC124	Sunshine	258527	7274474	532.5	60
SSAC125	Sunshine	258019	7272483	533	66
TMAC144	Ten Mile	231911	7256423	559	50

Note: all drill holes are vertical, co-ordinates are all GDA2020 Z51

Table A2: FY22 New Production Bores

<table>
<tr><th rowspan="2">Point ID</th><th rowspan="2">Location</th><th rowspan="2">Easting</th><th rowspan="2">Northing</th><th rowspan="2">RL (m)</th><th rowspan="2">End of Hole Depth (mbgl)</th><th colspan="2">Screened Interval (mbgl)</th><th rowspan="2">Aquifer</th></tr>
<tr><th>From</th><th>To</th></tr>
<tr><td>SSPB34</td><td>Sunshine</td><td>245576.3</td><td>7269981</td><td>538.8</td><td>47</td><td>42</td><td>47</td><td>Palaeochannel</td></tr>
<tr><td>SSPB35</td><td>Sunshine</td><td>244514.5</td><td>7267312</td><td>542.5</td><td>80</td><td>12</td><td>80</td><td>Fractured Basalt</td></tr>
<tr><td rowspan="2">SSPB37</td><td rowspan="2">Sunshine</td><td rowspan="2">256870.7</td><td rowspan="2">7273380</td><td rowspan="2">532.75</td><td rowspan="2">151</td><td>40</td><td>128</td><td rowspan="2">Palaeochannel / Sandstone</td></tr>
<tr><td>141</td><td>147</td></tr>
<tr><td>SSPB39</td><td>Sunshine</td><td>258254</td><td>7272761</td><td>533.25</td><td>62</td><td>43</td><td>61</td><td>Palaeochannel</td></tr>
<tr><td>SSPB44</td><td>Sunshine</td><td>258722.6</td><td>7275739</td><td>533</td><td>41</td><td>8</td><td>39</td><td>Sandstone</td></tr>
<tr><td>SSPB46</td><td>Sunshine</td><td>255039.1</td><td>7268393</td><td>532.75</td><td>87</td><td>18</td><td>85</td><td>Sandstone</td></tr>
<tr><td>SSPB48</td><td>Sunshine</td><td>258125</td><td>7272085</td><td>533.5</td><td>113</td><td>38</td><td>105</td><td>Palaeochannel / Sandstone</td></tr>
<tr><td>SSPB49</td><td>Sunshine</td><td>255177</td><td>7272131</td><td>532.5</td><td>68</td><td>24</td><td>66</td><td>Sandstone</td></tr>
<tr><td rowspan="2">SSPB50</td><td rowspan="2">Sunshine</td><td rowspan="2">255111</td><td rowspan="2">7272751</td><td rowspan="2">539.5</td><td rowspan="2">126</td><td>30</td><td>96</td><td rowspan="2">Sandstone</td></tr>
<tr><td>114</td><td>120</td></tr>
<tr><td>SSPB53</td><td>Sunshine</td><td>257736</td><td>7274193</td><td>532.25</td><td>54</td><td>33</td><td>51</td><td>Palaeochannel</td></tr>
<tr><td>SSPB56</td><td>Sunshine</td><td>258371</td><td>7273067</td><td>532.75</td><td>66</td><td>42</td><td>63</td><td>Palaeochannel</td></tr>
</table>

Note: all drill holes are vertical, co-ordinates are all GDA2020 Z51

Table A3: New brine assay data

Point ID	Sample Interval (mbgl)		K (mg/L)	Na (mg/L)	Mg (mg/L)	SO_4 (mg/L)	SOP* Grade (kg/m^3)
	From	To					
SSAC103	48	49	4,864	35,368	3,889	11,397	10.85
SSAC103	60	61	4,367	32,101	3,567	10,567	9.74
SSAC103	72	73	3,886	29,326	3,203	9,941	8.67
SSAC103	78	79	5,144	37,854	4,097	13,034	11.47
SSAC104	42	43	3,049	25,727	3,796	10,555	6.80
SSAC104	47	48	2,780	23,276	3,299	9,325	6.20
SSAC104	54	55	2,933	24,087	3,506	9,754	6.54
SSAC104	60	61	2,931	24,290	3,420	9,686	6.54
SSAC104	66	67	2,886	23,862	3,427	9,517	6.44
SSAC104	72	73	2,916	23,801	3,403	9,605	6.50
SSAC104	78	79	2,775	23,146	3,220	9,184	6.19
SSAC105	31	32	9,419	75,538	8,958	23,823	21.00
SSAC105	42	43	8,707	69,319	8,238	21,635	19.42
SSAC105	78	79	8,152	67,486	7,359	22,171	18.18
SSAC105	114	115	10,619	87,411	9,154	22,518	23.68
SSAC105	138	139	10,553	85,198	8,966	28,689	23.53
SSAC108	47	48	4,147	43,903	4,853	13,294	9.25
SSAC108	53	54	2,508	27,756	3,274	9,581	5.59
SSAC108	65	66	7,705	82,679	8,148	23,594	17.18
SSAC108	71	72	6,451	69,943	6,952	20,540	14.38
SSAC110	17	18	8,356	74,017	8,356	24,579	18.63
SSAC111	23	24	8,215	80,824	7,534	20,563	18.32
SSAC111	29	30	8,108	79,755	7,467	20,296	18.08
SSAC111	35	36	8,092	79,472	7,407	20,390	18.04
SSAC111	41	42	7,149	70,539	6,587	18,067	15.94
SSAC111	47	48	8,093	80,000	7,474	20,454	18.05
SSAC111	53	54	8,141	80,073	7,487	20,509	18.15
SSAC111	59	60	8,242	81,417	7,608	20,955	18.38
SSAC111	71	72	8,298	80,760	7,608	21,194	18.51
SSAC111	77	78	8,343	81,260	7,726	21,019	18.61
SSAC111	83	84	8,523	83,943	7,944	21,643	19.01
SSAC112	17	18	2,587	30,955	3,411	10,588	5.77
SSAC112	20	21	4,740	34,602	3,778	13,568	10.57
SSAC112	48	49	6,356	68,716	7,298	19,261	14.17
SSAC112	54	55	6,478	70,592	7,432	19,846	14.45
SSAC112	60	61	6,498	70,900	7,419	19,979	14.49
SSAC112	84	85	6,584	72,614	7,490	21,026	14.68
SSAC112	96	97	6,959	77,857	7,670	23,370	15.52
SSAC112	120	121	7,289	81,040	7,924	24,944	16.26
SSAC113	63	64	7,881	77,299	7,251	21,082	17.57
SSAC114	96	97	7,656	73,086	6,771	19,142	17.07
SSAC114	102	103	7,861	74,566	6,648	19,667	17.53
SSAC114	53	54	7,531	72,023	6,730	18,275	16.79
SSAC115	13	14	7,248	66,038	6,797	21,500	16.16

Point ID	Sample Interval (mbgl)		K (mg/L)	Na (mg/L)	Mg (mg/L)	SO_4 (mg/L)	SOP* Grade (kg/m^3)
	From	To					
SSAC115	19	20	6,984	70,709	6,079	17,684	15.57
SSAC115	24	25	7,258	73,582	6,270	18,414	16.19
SSAC115	34	35	7,049	71,483	6,157	17,942	15.72
SSAC115	41	42	6,370	63,745	5,636	17,025	14.20
SSAC115	52	53	7,455	73,009	6,587	19,002	16.63
SSAC115	59	60	7,314	74,480	6,684	18,779	16.31
SSAC115	63	64	7,893	77,834	7,254	21,484	17.60
SSAC116	17	18	7,574	75,934	6,455	18,280	16.89
SSAC116	23	24	5,914	59,287	5,139	15,900	13.19
SSAC116	29	30	8,163	81,434	6,834	19,556	18.20
SSAC116	35	36	6,980	70,615	5,968	17,167	15.57
SSAC116	41	42	7,854	74,003	6,029	18,394	17.52
SSAC117	28	29	5,012	60,463	6,496	21,337	11.18
SSAC117	28	29	4,877	60,092	6,399	21,044	10.88
SSAC117	28	29	4,918	60,657	6,409	21,233	10.97
SSAC118	24	25	6,518	69,800	6,142	18,757	14.53
SSAC118	29	30	6,547	69,628	6,133	18,752	14.60
SSAC118	35	36	6,525	69,192	6,105	18,666	14.55
SSAC118	41	42	6,543	68,760	6,026	18,489	14.59
SSAC118	47	48	7,123	71,560	6,232	19,107	15.88
SSAC118	53	54	6,834	70,033	6,070	18,818	15.24
SSAC118	59	60	6,731	68,622	5,957	18,580	15.01
SSAC119	11	12	4,332	N/A	N/A	15,901	9.66
SSAC119	29	30	4,986	N/A	N/A	18,049	11.12
SSAC119	41	42	5,059	N/A	N/A	18,404	11.28
SSAC119	47	48	5,142	N/A	N/A	20,124	11.47
SSAC119	53	54	5,195	N/A	N/A	21,400	11.59
SSAC119	53	54	5,551	N/A	N/A	26,240	12.38
SSAC119	59	60	8,184	N/A	N/A	29,557	18.25
SSAC119	64	65	7,361	N/A	N/A	N/A	16.41
SSAC119	65	66	6,322	N/A	N/A	N/A	14.10
SSAC119	75	76	6,954	N/A	N/A	N/A	15.51
SSAC120	35	36	3,661	43,802	4,858	14,940	8.16
SSAC120	47	48	3,860	45,863	4,984	15,660	8.61
SSAC120	56	57	4,207	49,532	4,991	16,417	9.38
SSAC120	71	72	5,892	62,885	5,791	17,959	13.14
SSAC121	17	18	7,719	88,093	9,437	23,293	17.21
SSAC121	53	54	4,275	50,741	5,560	14,240	9.53
SSAC121	55	56	6,515	75,669	8,083	19,539	14.53
SSAC121	59	60	6,531	74,767	8,026	19,219	14.56
SSAC121	71	72	6,668	76,889	8,224	19,819	14.87
SSAC121	77	78	7,144	81,394	8,697	20,997	15.93
SSAC121	83	84	5,866	68,711	7,380	18,162	13.08
SSAC122	41	42	4,040	46,386	4,634	15,334	9.01
SSAC122	56	57	4,135	46,957	4,889	15,161	9.22
SSAC123	23	24	4,978	49,857	3,974	14,087	11.10

Point ID	Sample Interval (mbgl)		K (mg/L)	Na (mg/L)	Mg (mg/L)	SO_4 (mg/L)	SOP* Grade (kg/m^3)
	From	To					
SSAC123	23	24	5,325	53,672	4,519	15,574	11.88
SSAC123	29	30	5,319	54,049	4,572	15,547	11.86
SSAC123	41	42	6,090	63,392	5,422	17,722	13.58
SSAC123	47	48	6,830	72,179	6,254	19,867	15.23
SSAC123	53	54	6,309	66,022	5,643	17,665	14.07
SSAC124	29	30	3,965	41,353	4,127	15,283	8.84
SSAC124	35	36	3,623	37,848	3,737	14,061	8.08
SSAC124	41	42	3,845	40,639	4,054	14,578	8.57
SSAC124	47	48	3,788	40,204	3,976	14,373	8.45
SSAC124	53	54	3,732	39,536	3,881	13,914	8.32
SSAC124	59	60	3,764	40,192	3,962	13,806	8.39
SSPB39	43	61	7,593	82,692	8,434	24,242	16.93
SSPB44	8	39	7,152	67,935	5,824	16,626	15.95
SSPB46	18	85	6,451	62,262	7,014	13,338	14.39
SSPB48	38	105	7,411	77,952	7,792	22,437	16.53
SSPB49	24	66	8,808	87,652	8,190	22,902	19.64
SSPB50	30	96	7,929	80,468	7,749	22,047	17.68
	114	120					
SSPB53	33	51	7,838	73,177	6,108	17,987	17.48
SSPB56	42	63	7,801	72,020	6,176	18,657	17.40

*SOP grade calculated by multiplying K by 2.23

N/A – No result available

Appendix 3 - JORC Code, 2012 Edition Reporting Tables

Section 1 – Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• The sampling program involved the collection of brine samples and samples of the aquifer material during drilling to define the brine and geological variation. • Lithological samples at 1m intervals were obtained from reverse circulation aircore drilling for the exploration holes and conventional mud rotary drilling for production bores. • The brine samples quoted in this announcement are presented in Appendix 2. Brine samples obtained from exploration drill holes were from taken from prolonged airlift yields and collected at the cyclone. These samples are interpreted to come from the zone above the drilling depth, although the possibility of downhole flow outside of the drill rods from permeable shallower zones cannot be excluded. • Brine samples from newly constructed production bore have been obtained from the end of bore development as test pumping had not been completed at the time of reporting. • All operational brine abstraction points (bores and trench pumps) are sampled on a weekly basis for brine production tracking. All samples have been obtained from a sample tap on the headworks of the production bore or trench pump whilst operational.

Criteria	JORC Code explanation	Commentary
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Reverse circulation aircore and air hammer (140mm diameter) drilling has been utilised for all new exploration holes drilled during this report. • All new production bores have been installed with a combination of conventional mud rotary and conventional air hammer at either 311mm or 355mm diameter.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• During exploration drilling geological sample recovery was high, in all lithologies. • Brine recoveries were high for Reverse Circulation drilling in the productive aquifer zones (Surficial sediments, palaeochannel sand and bedrock). The low transmissivity clay yielded very low volumes with more sporadic sampling resulting, generally occurring near the base of the formation. • Where mud rotary drilling has occurred for production bores geological sample recovery or representation was not considered high due to the nature drilling technique of the production bores. All geological information has been taken from the exploration aircore and RC hammer programmes, which the production bore has either twinned or reamed. The production bores have extended lower at some locations and at these locations the geology has been inferred from the production bore chip returns. • Samples over large, screened intervals will be indicative of the average across that screened interval. If in fractured rock aquifers, discrete inflow zones (fractures) will dominate the chemistry of the sample but are considered representative of the aquifer.
Geologic Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• All drill holes were geologically logged by a qualified geologist. • All geological samples collected during all forms of drilling are qualitatively logged at 1 m intervals, to gain an understanding of the variability in aquifer materials hosting the brine. • Geological logging and other hydrogeological parameter data is recorded within a database and summarised into stratigraphic intervals. • Geological logging and other hydrogeological parameter data is recorded within the database.

Criteria	JORC Code explanation	Commentary
Subsampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/ second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Operational production bore samples are considered the most representative method of sampling the aquifer. As samples have come from a period of sustained pumping. This data is reviewed monthly for any adverse trends. • Field analysis of pH, Salinity and specific gravity of brine from all operational production bores and trenches are completed weekly, in addition to the laboratory analysis • All samples collected are kept cool until delivery to the laboratory in Perth. • Brine samples were collected in clean, rinsed 250 or 500 ml bottles with little to no air. • Field brine duplicates have been taken at approximately 1 in 11 intervals.

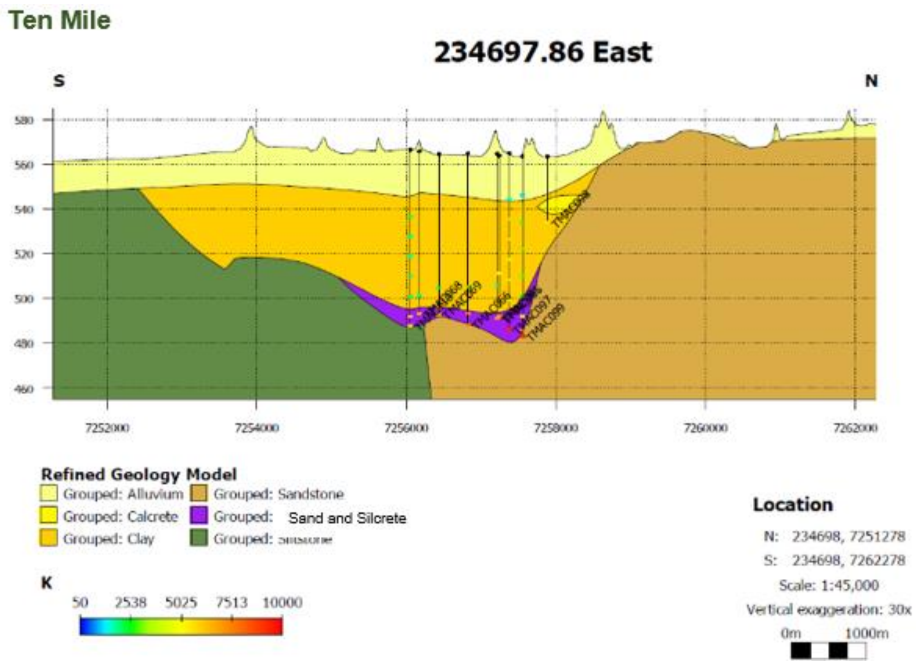
Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• Elemental analysis of brine samples presented in this announcement have been performed by Kalium Lake' site laboratory. Quality control of the results from exploration has been completed by sending approximately 1 in 10 duplicate samples to Perth laboratory, the Bureau-Veritas (BV) mineral processing laboratories. BV is certified to the Quality Management Systems standard ISO 9001. Additionally, they have internal standards and procedures for the regular calibration of equipment and quality control methods. • Laboratory equipment are calibrated with standard solutions. • Analysis methods for the brine samples used are inductively coupled plasma optical emission spectrometry, Ion Selective Electrode, Inductive coupled plasma mass spectroscopy, volumetrically and colour metrically. • The assay method and results are suitable for the calculation of a resource estimate. • Repeat assays and reference standards have been undertaken and indicate an average error of less than 5%. Errors of >10% have been omitted from the resource estimate. • Weekly operational lab analysis has been completed at the site laboratory, where K is determined through Inductive coupled plasma mass spectroscopy calibrated with standard solutions. Site laboratory analysis of K has an accuracy of between 200 and 800mg/L, typically less than 10%. • All onsite laboratory analysis are compared to the field analysis of SG, blind duplicate samples and quarterly check laboratory analysis of split samples at BV to ensure quality control. • Analysis to date is considered to be appropriate in relative accuracy for operational brine data reporting.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Multiple samples have also been taken from nearby locations during sampling to verify assay results and sampling methods. • Assays have been completed on samples taken over 24 months of operational pumping indicating representative and consistent grade. • Quarterly check laboratory analysis of split samples at BV has been completed to ensure quality control of the onsite laboratory analysis. • Data collection sheets and procedures are utilised onsite to ensure sample and data collection is standardised. • Assay data remains unadjusted as presented in Appendix 2.

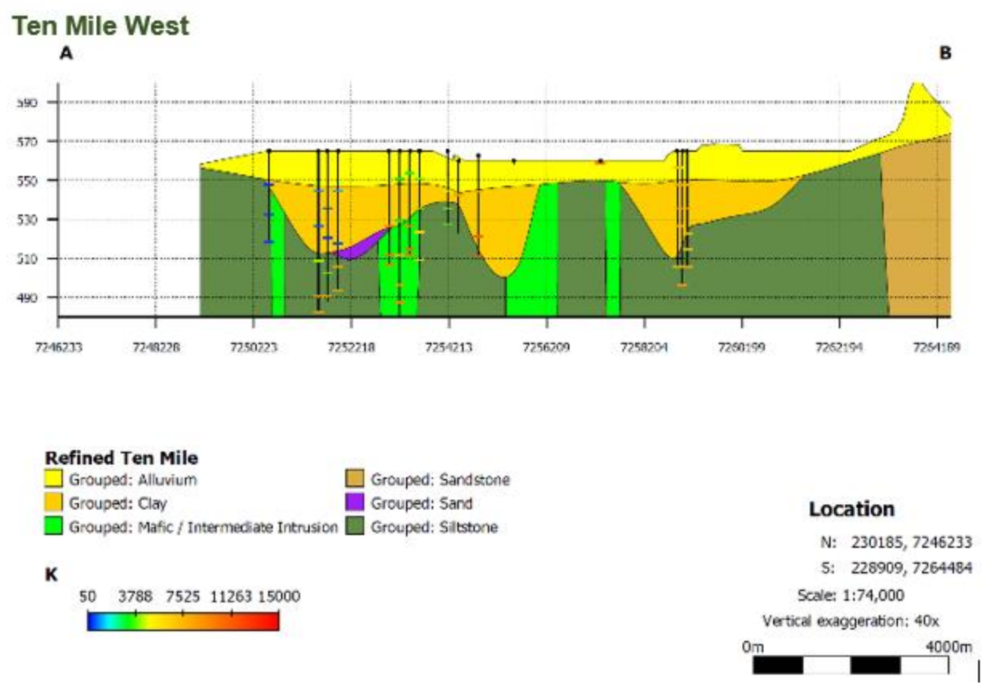
Criteria	JORC Code explanation	Commentary
		• On-site laboratory data is occasionally re-sampled to ensure any outlying sample analysis is checked. The check sample will replace the original analysis if more reflective of the previous week's analysis.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Hole location coordinates for production bores and exploration holes presented in Appendix 2 were obtained by a handheld GPS. Elevation has been determined using contours developed from the ortho-imagery DEM, with an estimated accuracy of +/-0.25m. • Regional auger holes have been surveyed using a handheld GPS. • The grid system used was MGA94, Zone 51.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Drill hole spacing is presented in this announcement • During operations, brine sampling of production bores and trenches has occurred on an approximately weekly basis. • The drill holes are not on an exact grid due to the irregular spatial nature of the deep targets and access issues when traversing the lakes.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Not applicable, considering the deposit type. • All drill holes are vertical given the estimated flat lying structure of a salt lake. • Trench pump samples are representative of the total trench network. Environmental factors of evaporation and rainfall do impact trench grades periodically. These have been observed and recorded in the operational data with ongoing work to measure their impacts more accurately.
Sample security	• *The measures taken to ensure sample security.*	• Perth Laboratory samples are labelled and transported by KLL personnel to Perth. They are then hand delivered to BV laboratories by KLL personnel.

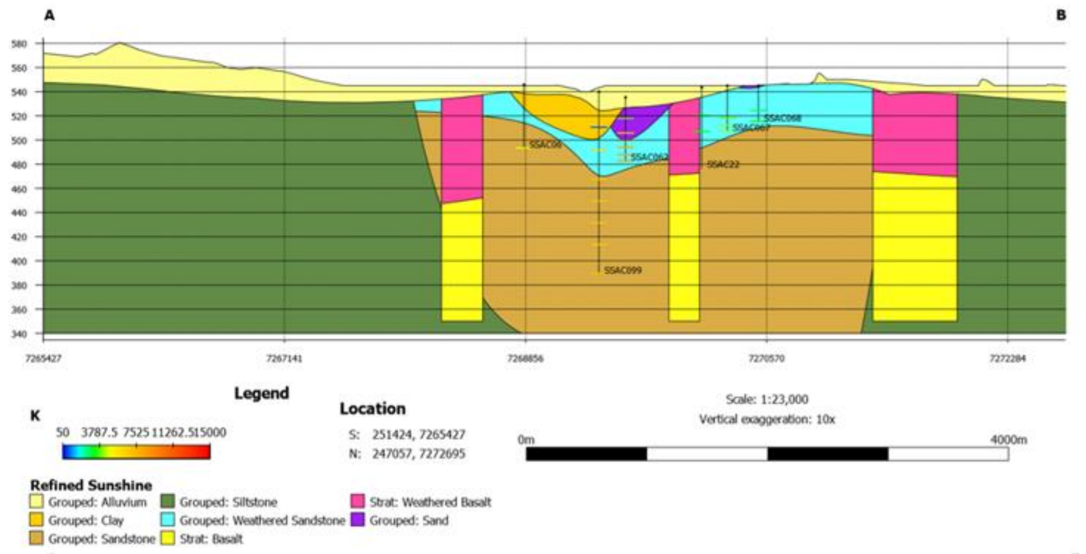
Criteria	JORC Code explanation	Commentary
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Advisian, K-Utec and SRK Consulting have conducted reviews of works undertaken previously. • No audits were undertaken. • Snowden completed a peer review to confirm compliance with the JORC Code and ASIC Information Note 214 of the maiden BSOPM Resources

Section 2 – Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Beyondie Potash Project is 100% owned by Kalium Lakes Limited (KLL or Kalium Lakes) with project tenure held under granted exploration licences: E69/3306, E69/3309, E69/3339, E69/3340, E69/3341, E69/3342, E69/3343, E69/3344, E69/3345, E69/3346, E69/3347, E69/3348, E69/3349, E69/3351, E69/3352, and E69/3594. KLL also has pending exploration licences: E52/3956, E52/3957; E52/4038, E69/4052, and E69/4098. • KLL also has granted Mining Licences: M69/145, M69/146 and M69/148 • KLL also has granted Miscellaneous Licences: L52/162, L52/186; L52/187, L52/187, L52/193, L69/28, L69/29, L69/30, L69/31, L69/32, L69/34, L69/35, L69/36, L69/38, L69/40, L69/41, L69/46, L69/47, L69/48, L69/52, L69/53, L69/54, L69/55, L69/59, L69/60, L69/61 • KLL's subsidiary, Kalium Lakes Infrastructure also has a granted Pipeline Licence - PL117. • KLL has a land access and mineral exploration agreement and a Mining Land Access Agreement with the Mungarlu Ngurrarankatja Rirraunkaja Aboriginal Corporation over tenures E69/3339, E69/3340, E69/3342, E69/3343, E69/3344, E69/3345, E69/3348, E69/3349 and E69/3351. • KLL has an exploration and prospecting deed of agreement, and a Mining Land Access Agreement with the Gingirana Native Title Claim Group over tenures E69/3341, E69/3346, E69/3347 and E69/3352.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• There has been no previous exploration for SOP at the BSOPM by third parties.

Criteria	JORC Code explanation	Commentary
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The deposit is a brine containing potassium and sulphate ions that can form a potassium sulphate salt. The brine is contained within saturated sediments below the lake surface and in sediments adjacent to the lake. The lakes sit within a broader palaeovalley system that extends over hundreds of kilometres, this system has been eroded into the North-West Officer Basin sediments. • Geology is described in more detail in this announcement. • An extract from the geology model is provided in the below section  •

Criteria	JORC Code explanation	Commentary
		 •

Criteria	JORC Code explanation	Commentary
		Lake Sunshine 
Drillhole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:* • *easting and northing of the drillhole collar* • *elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar* • *dip and azimuth of the hole* • *downhole length and interception depth* • *hole length.* *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• All new information has been included in drill collar table in Appendix 2. • All holes are vertical.

Criteria	JORC Code explanation	Commentary
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No grade cut-offs have been used. • Data aggregation comprised calculation of volume weighted average potassium, sulphate and magnesium concentration of Specific Yield and Total Porosity within a Resource area for a given geological unit (i.e. All palaeochannel sand and silcrete zones per area were aggregated and summarised as a volume weighted average).
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').*	• Not applicable as the resource is a brine.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Refer to figures/tables in this announcement.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• The exploration phase of the project involved a complex data collection programme, covering augering, geophysics, drilling, water and soil sampling, aquifer testing and laboratory test; as listed in this announcement. The exploration results that are updated in this report are presented in Appendix 2.

Criteria	JORC Code explanation	Commentary
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• See ASX announcement 27 August 2020 *Significant Increase in resources at Lake Sunshine* and ASX announcement 18 August 2021 *Feasibility Study Complete for new Base Case Production Increase to 120ktpa at Beyondie SOP Project* for detailed presentation of previous aspects of the project exploration programs. Kalium Lakes is not aware of any new information or data that materially affects the exploration results information included in these market announcements.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• At Stage 1 completion of test pumping of the newly installed production bores and drilling the remaining 8 to 13 production bores to make up the planned abstraction volumes to meet the 120ktpa Production Target. • At Stage 2, exploration drilling and installation of test bores at Central, White Lake and Aerodrome to increase confidence in existing Resources. • Installation and test pumping of test production bores at Ten Mile West and upgrade of Ten Mile West deep aquifer Resources.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Cross-check of laboratory assay reports and database. • Review of sample histograms used in Resource models. • Review of QA/QC analysis and sampling protocols. • Duplicate samples (~10%) from the augering program were assayed at ALS' Laboratory in Malaga in order to verify the assay results performed by BV. ALS is certified to ISO 17025, the standard for testing and calibration in laboratories. The results showed a good correlation amongst major ions (less than 10%) at both laboratories except for Sulphur (BV's values on average about 21% lower). Upon review of this discrepancy, BV conducted an internal check and found no reason to suggest the Sulphur assay was incorrect. BV analysed Sulphur by

Criteria	JORC Code explanation	Commentary
		ICP-OES, then converted to SO_4 by molecular weight calculation (this method assumes all S exists as SO_4, which may be incorrect). ALS used the method APHA 4500 to analyse the SO_4. For resource assessment, the lower sulphate results were considered as the worst-case scenario. • The data is judged to be adequate for all calculations made for brine resource estimates. For a Measured and Indicated Resource variabilities of less than 10% should be achieved, or a third independent laboratory should be consulted. BV has been used as the preferred laboratory for all further brine analysis following the check laboratory results in 2016. • Laboratory analytical quality was monitored through the use of randomly selected quality control repeat samples, in addition to laboratory standards. There were 64 repeat analyses of the 717 samples, representing approximately 1 in every 11 samples. Verification of assay data included ion balances and comparison of laboratory repeats and duplicates.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• Regular site visits have been undertaken throughout the exploration field programs and operations that has verified the data obtained, since 2017.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The resource is contained within Cenozoic Palaeovalley stratigraphy and the underlying fractured and weathered bedrock. • The geological model for the Indicated and Measured resources is well constrained. Drill hole coverage is relatively consistent for the scale of the project and the deposit is not structurally complex; it is alluvial fill in a palaeovalley depo-centre, within a shallow dipping large sedimentary basin. • The geological model for the fractured bedrock aquifers is less certain, the continuity and structural controls on rock fracturing are not well understood but can be mapped in geophysical responses and is considered to be associated with the dominant structural trends. • The nature of aquifer properties in different geologies does effect grade, transmissivity appears to be a minor diluting factor in the areas with the highest brine grades. In addition, the bedrock appears to be elevated in potassium which is likely to be a source of the mineralisation.

Criteria	JORC Code explanation	Commentary
		• The paleo-topography is key to the determining the aquifers with the highest transmissivity and predicting their extent within the vicinity of the surficial lakes where brine grade, specific yield and transmissivity are highest. • Refer ASX announcement 27 August 2020 *Significant Increase in resources at Lake Sunshine*, for detailed geological interpretation. Kalium Lakes is not aware of any new information or data that materially affects the exploration results information included in that market announcement.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The size of the mineral resource is largely defined by the company's tenement boundaries which have been fit to the margins of the salt lakes and palaeo-drainage system. Where the tenement boundary is wider than the palaeochannel system, the palaeochannel boundaries have been defined by geophysical surveys (gravity, passive seismic and TEM). • The thickness of the hosting aquifer holding the brine Mineral Resources has been based on the groundwater elevation (measured as depth below surface) and a sediment thickness above the impermeable bedrock or depth of drilling. • The volume of brine that can be abstracted has been based on a combination of aquifer test pumping and core calibrated geophysical techniques using Borehole Magnetic Resonance (BMR).
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and*	• As presented in this announcement. • Updated Variograms and Block model figures are presented below:

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<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
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whether the Mineral Resource estimate takes appropriate account of such data.

- *The assumptions made regarding recovery of by-products.*
- *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*
- *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*
- *Any assumptions behind modelling of selective mining units.*
- *Any assumptions about correlation between variables.*
- *Description of how the geological interpretation was used to control the resource estimates.*
- *Discussion of basis for using or not using grade cutting or capping.*
- *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*

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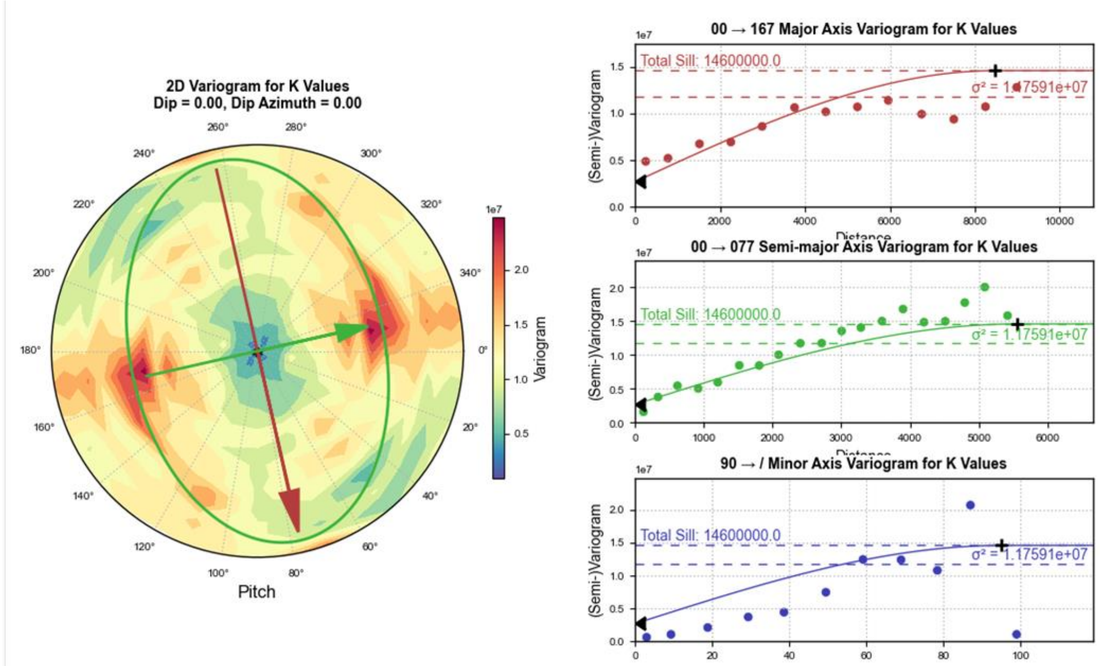
Ten Mile



Sunshine

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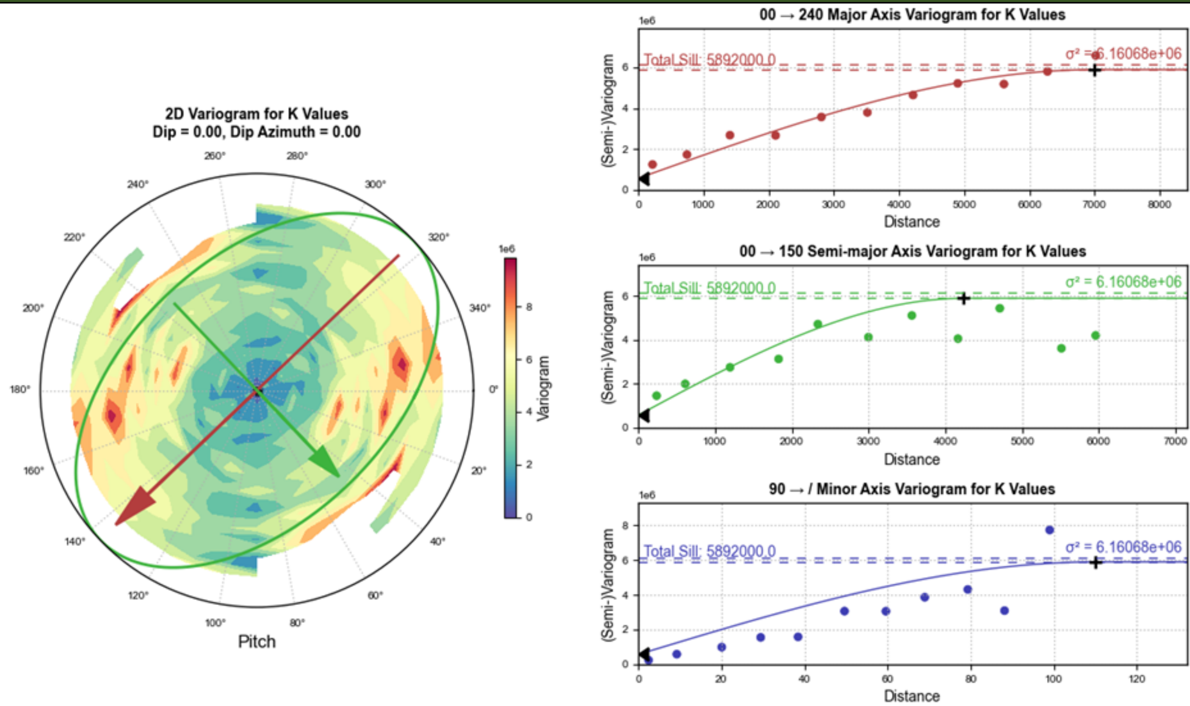

Additional details are presented below were relevant.
Potassium, sulphate and magnesium concentration point data were separated by project area (Ten Mile, Sunshine and Ten Mile West) and imported into the leapfrog modelling domain.
Sand and Silcrete in the model zones have been defined by the presence of either one of these facies in the lithological log, these maybe of weathered bedrock origin or transported origins but both exhibit high permeability during exploration drilling and test pumping.
Resource Zones were derived in GIS software using drill hole spacing and areas of measured drawdown from extended duration aquifer testing.
Volumetric weighted average of SOP grade per Resource Zone was calculated where multiple zones are determined.

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Criteria	JORC Code explanation	Commentary
		• To reflect the size and accuracy of the Resource Estimate all calculations have been rounded to decimal places as presented in this announcement. • Selective mining units have not been considered. • No cut-off grade has been used in the Mineral Resource Estimate
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages of potassium have been estimated on a dry, weight volume basis (%w/v). For example, 10 kg potassium per cubic metre of brine.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• No cut-off grade has been used in this Mineral Resource Estimate
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• The mining method recovery of brine from the below water table on the salt lake by pumping of shallow trenches (5 to 6m depth) and submersible bore pumps in production bores targeting the deeper aquifers. • Though specific yield and total porosity provide a measure of the volume of brine present in an aquifer system, hydraulic conductivity, transmissivity and specific storage controls are the main factors in defining Mining modifying factors, which are further discussed as part of the Ore Reserve estimate. • It is not possible to extract all the contained brine with these methods, due to the natural physical dynamics of abstraction from an aquifer and the varying nature of the aquifer and aquitard hydraulic conductivity. • The role of subsidence following dewatering of certain lithologies within the project is not well understood and may alter the storage potential of some high porosity sediments like clay and shale. • Flooding of the lake surfaces and evaporation ponds following significant rainfall events periodically impact mining and subsequent pump utilisation of all pumps due to full ponds. • Maintenance and servicing of bore pumps impacts pump utilisation which is accounted for by planning for 85% utilisation rates. • The current Ore Reserve provides an estimate of the economically extractable Resources.

Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Kalium Lakes has provided proof of concept by producing commercially saleable product. Commissioning is continuing to increase plant and pond efficiencies.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• The project is expected to have a limited, localized environmental impact, with minor impacts on surface disturbance associated with trench excavation, adjacent "fresher" aquifer systems, stock piling of salt by-products, stygofauna and potentially groundwater dependent vegetation. For which management plans have been developed. • Acid mine drainage is not expected to be an issue, however a management plan is in place to manage impacts.

Criteria	JORC Code explanation	Commentary
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Tonnages of potassium have been estimated on a dry, weight volume basis(%w/v). For example, 10 kg potassium per cubic metre of brine. • As the resource is a brine, density is applied to calculate concentration of the elements within it by volume. • The resource has been calculated from Sy (drainable porosity) to estimate a total drainable brine volume, determined using a combination of aquifer testing and laboratory calibrated geophysical methods.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• Classification of Resource categories is presented in the report. • An Exploration Target, Inferred, Indicated and Measured Mineral Resources are defined. The CIM Best Practice Guidelines for Resource and Reserve Estimation for Lithium Brines and JORC code were used to determine these confidence categories. • The results have appropriately defined the drainable Mineral Resources, which is reflective of the static volume of K, SO4 and Mg. When pumped these Resources do change and requires the need to regularly review the deposit as has been done in this report.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• None
Discussion of relative	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral*	• The mineral resource contains aqueous potassium, sulphate and other ions, existing as a brine in a sub-surface salt lake and adjacent lithologies. The current JORC code deals predominantly with solid minerals and does

Criteria	JORC Code explanation	Commentary
accuracy/ confidence	*Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	not deal with liquid solutions as a resource. The relative accuracy of the stated resource considers the geological uncertainties of dealing with a brine. See also: AMEC Brine Guideline and the CIM Best Practice Guidelines for Resource and Reserve Estimation for Lithium Brines. • Sy estimates to determine drainable brine volume in this Resource estimate have used industry best practice techniques. Traditional core derived analysis is point based, whilst a continuous log using BMR (borehole magnetic resonance) provides a far better means to deriving average properties for individual lithologies. • BMR technology has only recently been made financially economical in the brine resource industry by the use of slim-line tools with low signal to noise ratios and appropriate depths of investigation. • In reviewing the operational data against the block model data it is evident that there is a degree of conservatism within the block model as the produced grades appear significantly higher than the grades of the adjacent blocks within the model. This is considered due to the nature of the exploration sampling using aircore methods where dilution effects may occur by mixing with lower grade brine nearer the surface and subsequently flowing downhole during the drilling process in lower permeability formations (ie lacustrine clay). • The aspect of Specific Storage (or confined Storage) is a portion of the resource that is not accounted for in the Mineral Resource estimate or dealt within by the relevant brine guidelines. This is an area of conservatism in the Mineral Resource estimate that is only relevant to the confined aquifers that are under pressure, ie the basal sand aquifer of a palaeochannel.

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in section 2 and 3, also apply to this section.)

Criteria	Explanation	Comments
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• The Ore Reserve update from depletion presented in this report is based on the Ore Reserve Estimate completed as part of the BFS (See ASX announcement 18 September 2018 *Bankable Feasibility Study Completed*). The Ore Reserves presented are reconciled from abstraction to 30 June 2022 by a subtraction in volume. The Ore Reserve Estimate will be updated during studies in relation to further expansion opportunities. The Mine Plan has been re-run based on a 120ktpa expansion abstraction with updated modelling. There are no material changes to the basis of the Ore Reserve Estimate. • Indicated and Measured Resources are reported inclusive of Ore Reserves. • No inferred resources are included in the Reserve estimate.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• Site visits by the CP have been regularly completed since 2017, through the exploration, construction and operational phases of the project. Site visits have allowed for verification of the data collection.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• The Ore Reserve Estimate was completed as part of the BFS (See ASX announcement 18 September 2018 *Bankable Feasibility Study Completed*) with a +/-15% level of accuracy. • The Ore Reserve update in this report is an annual reconciliation based upon abstraction to 30 June 2022. • An updated mine plan has been developed to support the 120ktpa expansion study. This mine plan uses reserves and resources from the Stage 1 area. It has been developed following an update to the numerical groundwater models as described below. - The modelling as part of the 120ktpa expansion has been calibrated to the abstraction to 30 May 2021, and then used to simulate the updated Mine Plan for the 120ktpa expansion. The following sections provides an outline of the model development and outputs that contribute to the mine plan for 120ktpa expansion. - Four separate models are utilised for the BSOPM: o Ten Mile Lake and Beyondie Shallow Aquifer o Ten Mile Lake and Beyondie Deep Aquifer o Lake Sunshine Shallow Aquifer o Lake Sunshine Deep Aquifer

Criteria	Explanation	Comments
		- Model Development - The groundwater models were developed to evaluate the recoverable resource from the shallow unconfined aquifer and deep confined aquifers in the vicinity of Ten Mile Lake and Lake Sunshine. The models have been progressively developed since the PFS in 2017, as more data has become available. The most recent upgrades in 2021 include: o Refinement of each model with the updated geological models following drilling at Ten Mile West and drilling and test pumping at Sunshine; o Major upgrade at Ten Mile with the incorporation of Ten Mile West and at Sunshine with the deeper sandstone aquifer update. o Update the borefield and trench installations to as built. o Input of additional water level and pumping calibration data from continuous operational data between October 2019 and April 2021. o Import of the updated block model grade distributions as concentrations of K as described in the Mineral Resource Estimate. o Run additional predictive scenarios based on the 120ktpa expansion at 91% recovery (as per the FEED optimisation (refer ASX announcement 21 January 2019 *FEED Process Recovery Optimisation*) • Consideration to brine recharge has been assessed in the BFS included in the mine plan, a scenario with recharge was run to determine the differences, but as per the BFS Ore Reserve Estimate has not been included in the financial model case due to its unpredictable nature. Recharge contributes to both dilution and additional tonnes.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• A cut-off grade of 2,500 mg/L has been applied to the Ore Reserve Estimate. • The solute transport model has been used to predict the grade over the life of mine from each abstraction point, where grades at the abstraction point diminishes below the cut-off grade the production is omitted from the Reserve.
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).*	• The volume of convertible resources has been determined by detailed numerical groundwater flow and solute transport modelling. Modelling has been completed to the Australian Groundwater Modelling Guidelines using the FeFlow modelling package. • The construction of the numerical groundwater model is based on the geological model derived from drill data. Drill spacing is such to have high confidence in geology and brine distribution in the resource areas.

Criteria	Explanation	Comments
	• *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	• Calibration of the groundwater model to steady state and transient conditions (test pumping data from trenches and bores, trial pond pumping and operational data) using an iterative process of manual and automated calibration to reduce statistical residual error between observed data and simulated data. This has been updated as part of the 120ktpa study to include calibration to the 18 months of operational pumping data. • Sensitivity analysis to "compare model outputs with different sets of reasonable parameter estimates, both during the period of calibration (the past) and during predictions (in the future)". • Predictive modelling of the resource recovery by adding production bores within the deep aquifer and extending trenches over the lake surface and simulating pumping rates over the life of mine. • Concentration of potassium has been directly input to the numerical model from the block model and simulated using conservative transport parameters. • Abstraction is mapped using capture zone analysis, any abstraction originating from outside of the Resource zone is factored out of the Reserve calculation. • Trial lake surface trenches and deep production bores have been tested in the field and proved successful in abstraction of brine. • Well efficiencies have been considered when simulating abstraction rates. An average well efficiency of 60% is derived for the abstraction assessment. • Grade control in brine resources relates to the target grade of brine delivered to the concentrator ponds. Flexibility in the infrastructure design is considered the grade control management measures. • Inferred Resources are not included in the Reserve estimate. Inferred Resources make up the later part of the mine plan. • Hydraulic models have been developed to ensure brine pumping can be undertaken with the selected pipes and pumps in the study. • New abstraction bores, headworks, power supply, pumping, telemetry and monitoring have been incorporated in the design.

Criteria	Explanation	Comments
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	• The metallurgical process is covered broadly through the following stages; Evaporation pond crystallization and harvest of KTMS; Pre-treatment of harvested KTMS; conversion of KTMS to Schoenite; Flotation; Cooling crystallization; conversion of Schoenite to SOP; Dewatering; Drying and Compaction. The process is considered appropriate given the high potassium brine based nature of the mineralisation. • For the 120 ktpa SOP production target, the project will require up to 55 extraction bores, up to 58 km of trenches, 7 – 8.5 GL/a brine flow, 446 hectares of evaporation ponds. The extra pond area requirement was determined through modelling, using actual brine composition and site evaporation data as inputs. Design criteria include: 8,766 evaporation pond operating hours per year, 94% evaporation pond recovery, 1 mm sealed HDPE lined ponds, 7,900 purification plant operating hours per annum and 52% purification plant recovery. • The metallurgical process proposed is similar to that used by major existing SOP producers in Utah(Compass Minerals), Luobupo (SDIC), Salar de Atacama(SQM). Kalium Lakes has shown proof of concept to date and is continuing commissioning to increase efficiencies to ramp up and achieve steady state production operations. • No additional metallurgical test work has been performed since the 2019 FEED optimisation (refer ASX announcement 21 January 2019 *FEED Process Recovery Optimisation*). Brine samples and raw product salts from the evaporation ponds have been analysed in the on-site and Perth based BV laboratory for grade and composition on an ongoing basis. Commerically saleable SOP product has been produced on specification providing proof of concept for the process. • There are no elements in the BSOPM brine that are likely to be deleterious. However NaCl to potassium ratio in harvest salts does impact process recoveries. • Over 1,700 tonnes of commercial quality SOP has been produced to 7 August 2022 (refer ASX announcement 18 August 2022 *Equity Capital Raising Presentation*) • Hypersaline potash brine is not defined by any specifications.
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the*	• Primary Approvals have been secured, incluing Ministerial Statement 1098 (EPA) and EPBC 2017:8088 to support 100 ktpa.

Criteria	Explanation	Comments
	consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	• All environmental approvals and permits for the 90 ktpa operation have been secured, with the Operating License being approved on 15 December 2021 for up to 100 ktpa in line with primary approvals. Kalium Lakes' current Mining Proposal 77706 (DMIRS) allows for production up to 90 ktpa and will be amended in line with Kalium Lakes' primary approval following continued discussions with the Government Regulators to allow for production increase. • Environmental Monitoring programmes for the 90 ktpa operation have been implemented as required by MS1098 and EPBC 2017:8088, including fauna, flora and groundwater monitoring plans. • Various secondary approvals have also been received, including: ○ Mining Proposal Reg ID 77706 (MP) - Department of Mines, Industry Regulation and Safety (DMIRS), ○ Mine Closure Plan Reg ID 77706 (MCP) - DIMIRS ○ Various Works Approvals - DWER • A detailed review of the current Environmental and Project approvals was undertaken to establish an optimal approvals pathway for a 120 ktpa operation, the focus of the review was to: ○ Inform design activities, where possible, to minimise or avoid any environmental impact to Night Parrot, Bilby and Tecticornia habitats ○ Identify activities that could be competed utilising existing approvals • KLL has engaged with key regulatory authorities including EPA Services, DWER and, DMIRS to ensure that their assessment requirements and timelines are well understood, to identify assessment issues or risks and develop mitigation measures for these and to increase confidence that the proposed approvals pathway is fit for purpose A two phased approval strategy was developed to achieve the accelerated timeline as set out below: • Phase 1 key aspects – construction to support the 120ktpa operation ○ The operating licence for 100 ktpa was secured in December of 2021, which will include a provision to construct the additional ponds (DWER). ○ Includes the existing MP and MCP that will allow for the bore expansion at Ten Mile and Sunshine and commence construction of ponds (DMIRS).

Criteria	Explanation	Comments
		○ Amendments to existing MP and MCP to include ancilary infrastructure (roads, topsoil stockpiles etc) (DMIRS). • Phase 2 involves – Approval to Operate ○ A new Mining Proposal and Mine Closure Plan (DMIRS) was submitted in Q2 CY2022 for the proposed Ten Mile West borefield and trenches after discussions with DMIRS indicated the area had to the potential to be assessed under Mining Act 1987 only, as a satelite project in support of the current project. ○ A section 45C application is anticipated to be submited in Q1 CY2023 to amend MS1098 from 100 ktpa to 120 ktpa as a non substantial change to the project, pending the outcome of discussions with EPA post changes to the application process. There are no material changes to the 100 ktpa EPA approval and approval is anticipated by Q4 CY2023 based on similar approval benchmarks and current delays in regulatory approval timeframes. ○ Amendment to the 100 ktpa Operating Licence requesting increased production to 120 ktpa will be submitted once the 45C Approval has been secured. Operating licence approvals typically take 90 days for approval once submitted, however, with current regulatory assessment processes experiencing substantial delays, this is likely to change. ○ Amendment to the MP will be submitted to facilitate production of 120 ktpa. Anticipated approval Q4 CY2023 based on similar approval benchmarks. • A Section 38 application to EPA will be required to increase in fresh water demand from 1.5GL to 2GL. Secondary approvals including mining proposal (DMIRS) and 5C licence (DWER) will be submitted in parallel to the s38 application, with final approval anticipated for Q4 CY2024 based on discussions with the EPA and an assessment of the work required.
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease*	The assumptions in ASX Announcement 18 August 2021 *Feasibility Study Complete for new Base Case Production Increase to 120ktpa at Beyondie SOP Project* are still valid. The impact on Infrastructure for the 120 ktpa production target are negligible and outlined as follows: • Infrastructure at the mine area, including workshops, warehousing, administration buildings, emergency services, laboratory, stores, and fuel farm will remain unchanged from its current built state. The increased

Criteria	Explanation	Comments
	with which the infrastructure can be provided, or accessed.	demands on fuel use, servicing and storage space are negligible for the increase to 120 ktpa. There are no increased demand for administration buildings because of the increase to 120 ktpa. The existing laboratory is sufficient for the increase to 120 ktpa. • The power station may require an additional generator and allowances have been made accordingly. • The accommodation village will remain unchanged from its current built state. This is because there will not be any increased labour demands (i.e., demand over and above what has already been put in place for the current 90 ktpa operation) on site to support operation of the 120 ktpa production. • The gas pipeline and supply infrastructure will remain unchanged from its current built state. This is because the existing gas pipeline, gas inlet, and gas delivery stations have enough reserve capacity to supply the additional gas demand by the power station and plant when increasing the production of SOP to 120 ktpa. • The Raw water infrastructure will require an upgrade to the existing, above-ground HDPE pipeline to transfer raw water to the central raw water tank located at the process plant. Raw water will be pumped from water supply bores located within an area extending West and South of the process plant site. Approximately 1.5 GLpa of raw water will be required for the process plant and potable water for 120 ktpa SOP production. • Communications infrastructure will remain unchanged from its current built state.

Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.*
	• *The methodology used to estimate operating costs.*
	• *Allowances made for the content of deleterious elements.*
	• *The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co-products.*
	• *The source of exchange rates used in the study.*
	• *Derivation of transportation charges.*
		The assumptions in ASX announcement 18 August 2021 *Feasibility Study Complete for new Base Case Production Increase to 120ktpa at Beyondie SOP Project* are still valid.
		• The Capital cost estimate (CAPEX) was based on the following fundamentals:
		  ○ Work Breakdown Structure.
		  ○ Material Take-Offs from designs for construction and fabrication.
		  ○ Mechanical equipment list, specifications & data sheets.
		  ○ Electrical equipment load list.
		  ○ Vehicle list.
		  ○ Proposals (materials & equipment supply, installation, design & construct, etc.).
		  ○ Freight estimates based on supply weight / volume requirements per 23t payload trailer (2.4m x 14m).
		  ○ Direct labour hours and rates build up by first principles.

Criteria	Explanation	Comments
	• *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	○ Benchmarked allowances and factors (minimal). ○ Preferred contracting strategies. ○ Use of existing knowledge from previous experience information where no other source was available. ○ Contingency based on capex input confidence and discreet risk modelling. • The capital cost estimate was completed to an accuracy meeting the criteria of The Association for the Advancement of Cost Engineering (AACE) Class 3 estimate accuracy of -10% to -20% on the low side, and +10% to +30% on the high side. • The operating cost estimate (OPEX) for 120 ktpa has been developed using actual operating expenses and data where available. Variable costs for 120 ktpa have increased, with the product haulage, diesel consumption (mainly from operating bore field pumps), workforce labour and ROM & waste salt haulage costs the cost elements that increased the most. Operating cost estimates have been based on the following: ○ Overall management will be undertaken by KLL. ○ A number of Haulage contractors have been engaged to provide all transport of SOP product from the site to the distribution centres in WA. ○ Port and shipping operations will be contractor owned and operated. ○ Accommodation village is contractor operated. ○ FIFO flights for all personnel are based on a combination of commercial services between Perth and Newman and charter flights from Perth to BSOPM and will be arranged and managed by KLL. ○ Flight costs are based on commercial services between Perth and Newman. ○ Diesel fuel is purchased in bulk and distributed by KLL. ○ Gas is supplied as Natural Gas (NG) via the existing lateral tie-in to the Goldfields Gas Pipeline (GGP) near Kumarina roadhouse on the Great Northern Highway (GNH) under an existing gas supply contract until December 2022, and which is under discussion for extension until December 2024. ○ Power is provided via a owner-operated gas-fuelled power station. ○ Gas pipeline, gas delivery and the power station are maintained by third party contractors ○ All bores and pumps are operated by diesel powered generators ○ Allowances for maintenance down time have been considered by operating unit.

Criteria	Explanation	Comments
		○ The estimate base date is Q2 CY2022. ○ Escalation of the estimate past the base date has been excluded. ○ All costs are in Australian dollars (AUD). ○ The forward curve of the AUD:USD exchange rates (source: Reuters mid May 2022 has been assumed for the period from July 2022 to December 2024 in which the exchange rate is assumed to be in a range of 0.68 to 0.69. From January 2025 onwards an exchange rate of 0 72 has been assumed. ○ GST has been excluded. ○ All tonnages are on a dry basis unless otherwise indicated. ○ WA State Royalty Rate - 5% of "royalty value", with a 50% rebate on a quarterly basis for the first two years of commercial production subject to the average realised SOP price being less than A$1,000 per tonne for the quarter, per recent advice from the WA Government. ○ Native Title Royalty – 0.75% of gross revenue less shipping costs, selling agent's fees, marketing charges payable under offtake agreement and land based haulage & port costs ○ Founders' Royalty - 1.9% of gross proceeds received by KLL for the sale of potash, less any refunds, claims or discounts.
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• Product specifications identified and replicated with metallurgical test work. • Market reports from CRU, and Argus have been utilised to derive the assumption for the SOP price. • SOP market studies by CRU and Argus have been used as the basis for the commodity price. Long term SOP price forecasts were obtained in March 2022 for the period to 2040 which the Company has adopted in its forecasts. The Company has assumed that SOP prices remain stable for the period after 2040 for the reminder of the life of mine. The average net SOP price is calculated as the average CFR price less agent fee, marketing fees and CPT costs. • The forward curve of the AUD:USD exchange rates (source: Reuters mid May 2022 has been assumed for the period from July 2022 to December 2024 in which the exchange rate is assumed to be in a range of 0.68 to 0.69. From January 2025 onwards an exchange rate of 0 72 has been assumed.. • Shipping and freight costs have been determined using an Ocean Freight Outlook Study commissioned by Braemar ACM Shipbroking for Kalium Lakes in May 2021.

Criteria	Explanation	Comments
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• Demand, supply and stock situation determined for SOP by studying recent market reports from CRU and Argus. Reports covered consumptions trends and discussions with factors that can likely affect supply and demand into the future. The reports also covered price and volume forecasts based on market trends. • The proposed SOP product meets or exceeds current market accepted specifications. • There is a Binding Offtake Agreement between KLL and K+S Asia Pacific Pte Ltd (K+S) that will see K+S committed to taking 120 ktpa of KLL's product, with K+S receiving a marketing fee for selling and distributing the SOP product.
Economic	• The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. • NPV ranges and sensitivity to variations in the significant assumptions and inputs.	• NPV was stated in the 120ktpa Feasibility Study, see ASX announcement 18 August 2021 *Feasibility Study Complete for new Base Case Production Increase to 120ktpa at Beyondie SOP Project.* However, given Kalium Lakes has commenced SOP production (and considering the increase in all in sustaining cost detailed in the ASX announcement 26 July 2022 *Investor Presentation*), the financial forecasts previously disclosed by Kalium Lakes (including the NPV and EBITDA figures in the ASX announcement 18 August 2021 *Feasibility Study Complete for new Base Case Production Increase to 120ktpa at Beyondie SOP Project)* are no longer relevant.

<table>
<tr><th>Criteria</th><th>Explanation</th><th>Comments</th></tr>
<tr>
<td>Social</td>
<td>The status of agreements with key stakeholders and matters leading to social licence to operate.</td>
<td>

Two Native Title Land Access Agreements have been executed allowing for the consent to the grant of mining leases, ancillary tenure and approvals required for the BSOPM.
The BSOPM tenements were originally applied for by Rachlan Holdings Pty Ltd (Rachlan) with an agreement in place to transfer tenure to KLL as soon as practicable after grant, which has occurred for all granted tenements to date.
All relevant regulatory departments and authorities have been consulted extensively.
Access agreements are in place with all pastoralists and neighbours that will allow construction and development of the project.
Kalium Lakes recently successfully negotiated and executed a Deed of Variation (DoV) to include the Ten Mile West area under the provisions of the existing Gingirana LAA, critical for expansion.
Relationship Committees have been established with both groups, with meetings scheduled every six months to discuss and implement the relevant aspects of the LAA’s.
As part of the LAA’s, Kalium Lakes agreed Cultural Heritage Management Plans with both the Gingirana and Birriliburu peoples that outline the processes and obligations relating to the identification, protection and management of cultural heritage sites and places located on and near the Project footprint. This means that heritage surveys and, in some areas, cultural monitoring will be required prior to any ground disturbing activities, and these will be done in collaboration with the Gingirana and Birriliburu peoples.
Required heritage surveys for the update to the production target of 120 ktpa have been completed as outlined below:

<table>
<tr><th>Area</th><th>Activities</th><th>Native Title Group</th></tr>
<tr><td>Ten Mile</td><td>Additional ponds, additional bores, additional topsoil, additional brine pipeline, excess salt, powerline, supporting access tracks</td><td>Gingirana</td></tr>
<tr><td>GN Hwy Intersection</td><td>Backload shed</td><td>Gingirana</td></tr>
<tr><td>Sunshine</td><td>Additional bores, supporting access and brine pipeline</td><td>Gingirana / Birriliburu</td></tr>
<tr><td>Ten Mile West</td><td>Trenches, monitoring bores, production bores, brine pipeline and supporting access</td><td>Gingirana</td></tr>
<tr><td>Ten Mile South</td><td>Exploration bores and supporting access to bores from main tracks</td><td>Gingirana</td></tr>
</table>
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Criteria	Explanation	Comments
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• Kalium Lakes has reviewed the legislative requirements and has compiled a register of the environmental, heritage and planning approvals and permits necessary to scope, develop, construct and operate the BSOPM expansion to a production target of 120 ktpa. • See environmental section for approvals
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• Proved and Probable Reserves were estimated in the BFS (Refer ASX announcement 18 September 2018 *Bankable Feasibility Study Completed).* The Proved and Probable Ore Reserves presented in this report are updated based on depletion from brine abstraction. The Ore Reserve Estimate will be updated during the studies in relation to further expansion opportunities and will incorporate all updates detailed in the mine plan and the updated Mineral Resources Estimate. • Proved Reserves come from the production bores in the measured zones at Ten Mile and Sunshine deep aquifer. All trench pumps and all other production bores have been allocated to Probable Reserves. Though the lake surface has Measured Mineral Resources for the top 5 m the effects of variable recharge on this zone means that these Resources remain in the Probable category. • 36% of the Probable Ore Reserves have been derived from the Lake Sediments, 64% from production bores. • 24% of the Total Reserves have been derived from the Lake Sediments, 76% from production bores.

Criteria	Explanation	Comments
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• Reviews completed as part of the BFS and Project Update are valid (refer ASX announcements 18 September 2018 *Bankable Feasibility Study Completed,* ASX announcement 21 May 2020 *Project Update and A$61 million Equity Raising* and ASX announcement 18 August 2021 *Feasibility Study Complete for new Base Case Production Increase to 120ktpa at Beyondie SOP Project)*
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• Model sensitivity and predictive uncertainty analysis has been completed on the numerical models during the BFS to determine the most sensitive parameters of the model and the reliability of the data used to gain an understanding of the relative accuracy of the model predictions. • Highly sensitive uncertainties in the modelling include aquifer recharge and vertical leakage from the lacustrine clay. Modelling has taken a conservative approach to these parameters to ensure the model is representative of the level of understanding of the hydrogeology. • NPV ranges and sensitivities determined for key assumptions and inputs including, SOP price, production rate, capital cost, operating cost, foreign exchange, discount rate and construction delays.